

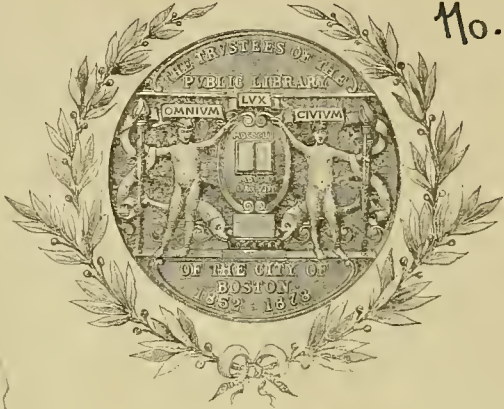
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THE UNITED STATES
STRATEGIC BOMBING SURVEY

THE FIFTH AIR FORCE
IN THE
WAR AGAINST JAPAN

Military Analysis Division

June 1947

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THE UNITED STATES
" "
STRATEGIC BOMBING SURVEY

THE FIFTH AIR FORCE
IN THE
WAR AGAINST JAPAN

Military Analysis Division

June 1947

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This report was written primarily for the use of the United States Strategic Bombing Survey in the preparation of further reports of a more comprehensive nature. Any conclusions or opinions expressed in this report must be considered as limited to the specific material covered and as subject to further interpretation in the light of further studies conducted by the Survey.

FOREWORD

The United States Strategic Bombing Survey was established by the Secretary of War on 3 November 1944, pursuant to a directive from the late President Roosevelt. Its mission was to conduct an impartial and expert study of the effects of our aerial attack on Germany, to be used in connection with air attacks on Japan and to establish a basis for evaluating the importance and potentialities of air power as an instrument of military strategy for planning the future development of the United States armed forces and for determining future economic policies with respect to the national defense. A summary report and some 200 supporting reports containing the findings of the Survey in Germany have been published.

On 15 August 1945, President Truman requested that the Survey conduct a similar study of the effects of all types of air attack in the war against Japan, submitting reports in duplicate to the Secretary of War and to the Secretary of the Navy. The officers of the Survey during its Japanese phase were:

Franklin D'Olier, *Chairman*.

Paul H. Nitze, Henry C. Alexander, *Vice Chairmen*.

Harry L. Bowman,

J. Kenneth Galbraith,

Rensis Likert,

Frank A. McNamee, Jr.,

Fred Searls, Jr.,

Monroe E. Spaght,

Dr. Lewis R. Thompson,

Theodore P. Wright, *Directors*.

Walter Wilds, *Secretary*.

The Survey's complement provided for 300 civilians, 350 officers, and 500 enlisted men.

The military segment of the organization was drawn from the Army to the extent of 60 percent, and from the Navy to the extent of 40 percent. Both the Army and the Navy gave the Survey all possible assistance in furnishing men, supplies, transport, and information. The Survey operated from headquarters established in Tokyo early in September 1945, with sub-headquarters in Nagoya, Osaka, Hiroshima, and Nagasaki, and with mobile teams operating in other parts of Japan, the islands of the Pacific, and the Asiatic mainland.

It was possible to reconstruct much of war-time Japanese military planning and execution, engagement by engagement, and campaign by campaign, and to secure reasonably accurate statistics on Japan's economy and war production, plant by plant, and industry by industry. In addition, studies were conducted on Japan's over-all strategic plans and the background of her entry into the war, the internal discussions and negotiations leading to her acceptance of unconditional surrender, the course of health and morale among the civilian population, the effectiveness of the Japanese civilian defense organization, and the effects of the atomic bombs. Separate reports will be issued covering each phase of the study.

The Survey interrogated more than 700 Japanese military, government, and industrial officials. It also recovered and translated many documents which not only have been useful to the Survey, but also will furnish data valuable for other studies. Arrangements have been made to turn over the Survey's files to the Central Intelligence Group, through which they will be available for further examination and distribution.

ACKNOWLEDGMENT

This report has been guided by an original report prepared for the United States Strategic Bombing Survey by Brig. Gen. J. V. Crabb, Commanding General, V Bomber Command. The information contained in this report is based on official reports of the Army Air Force, Far East AF, Allied Air Force SWPA, General Headquarters SWPA, the Fifth AF and analyses prepared by the USSBS. Unless otherwise designated, the claims in this report and the statistics used in discussion of enemy aircraft and shipping losses are taken from final claims of the Fifth Air Force based on its combat records.

The report has been primarily the work of these officers:

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Former A-3, Fifth AF, FEAF and Dir. of Ops., AAF.
- Col. Benjamin Cain,
Former A-2, Fifth AF, FEAF and Dir. of Intel., AAF.
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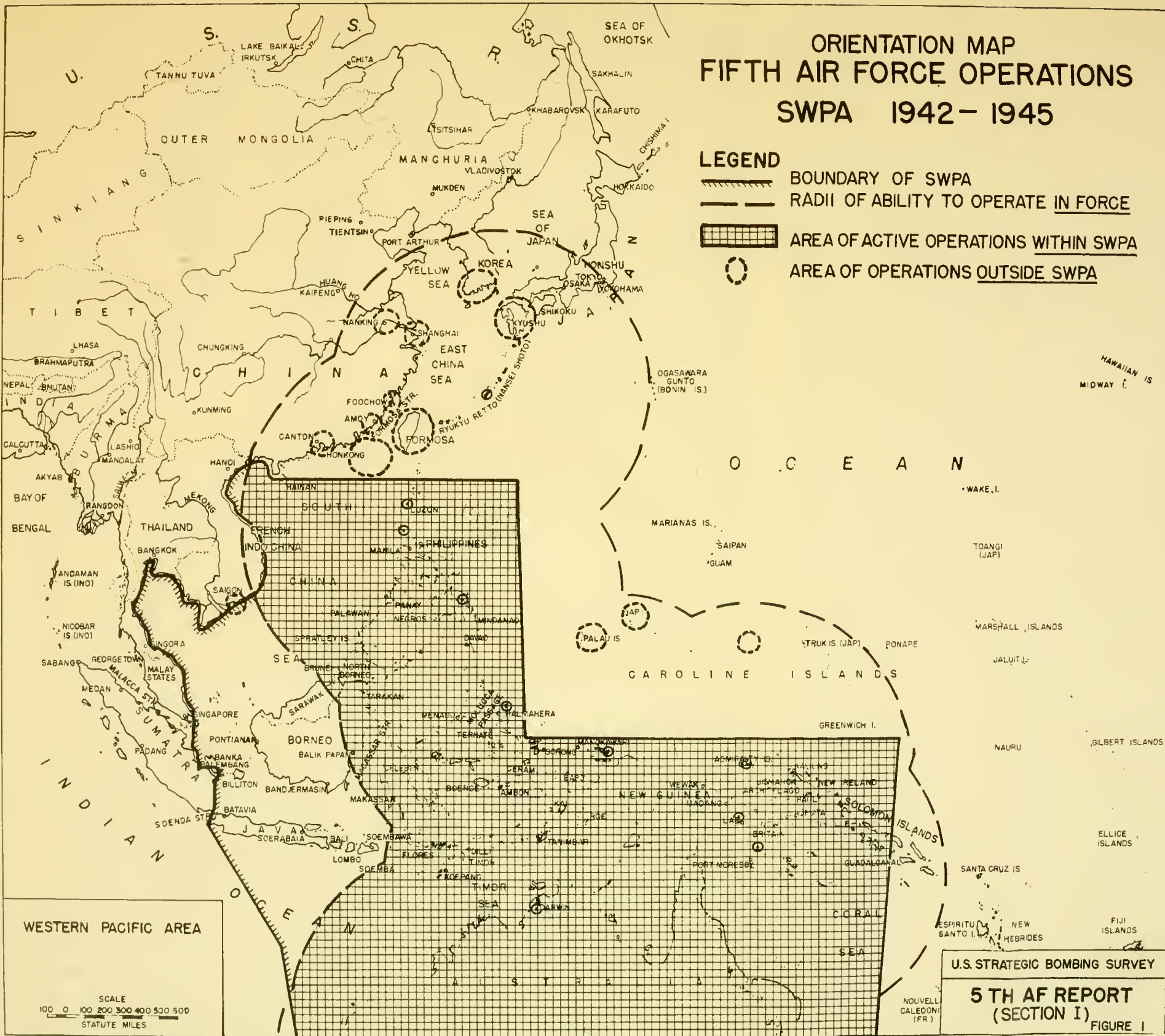
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SECTION I
INTRODUCTION

ORIENTATION MAP FIFTH AIR FORCE OPERATIONS SWPA 1942-1945

LEGEND

-  BOUNDARY OF SWPA
-  RADII OF ABILITY TO OPERATE IN FORCE
-  AREA OF ACTIVE OPERATIONS WITHIN SWPA
-  AREA OF OPERATIONS OUTSIDE SWPA



WESTERN PACIFIC AREA

SCALE
100 0 100 200 300 400 500 600
STATUTE MILES

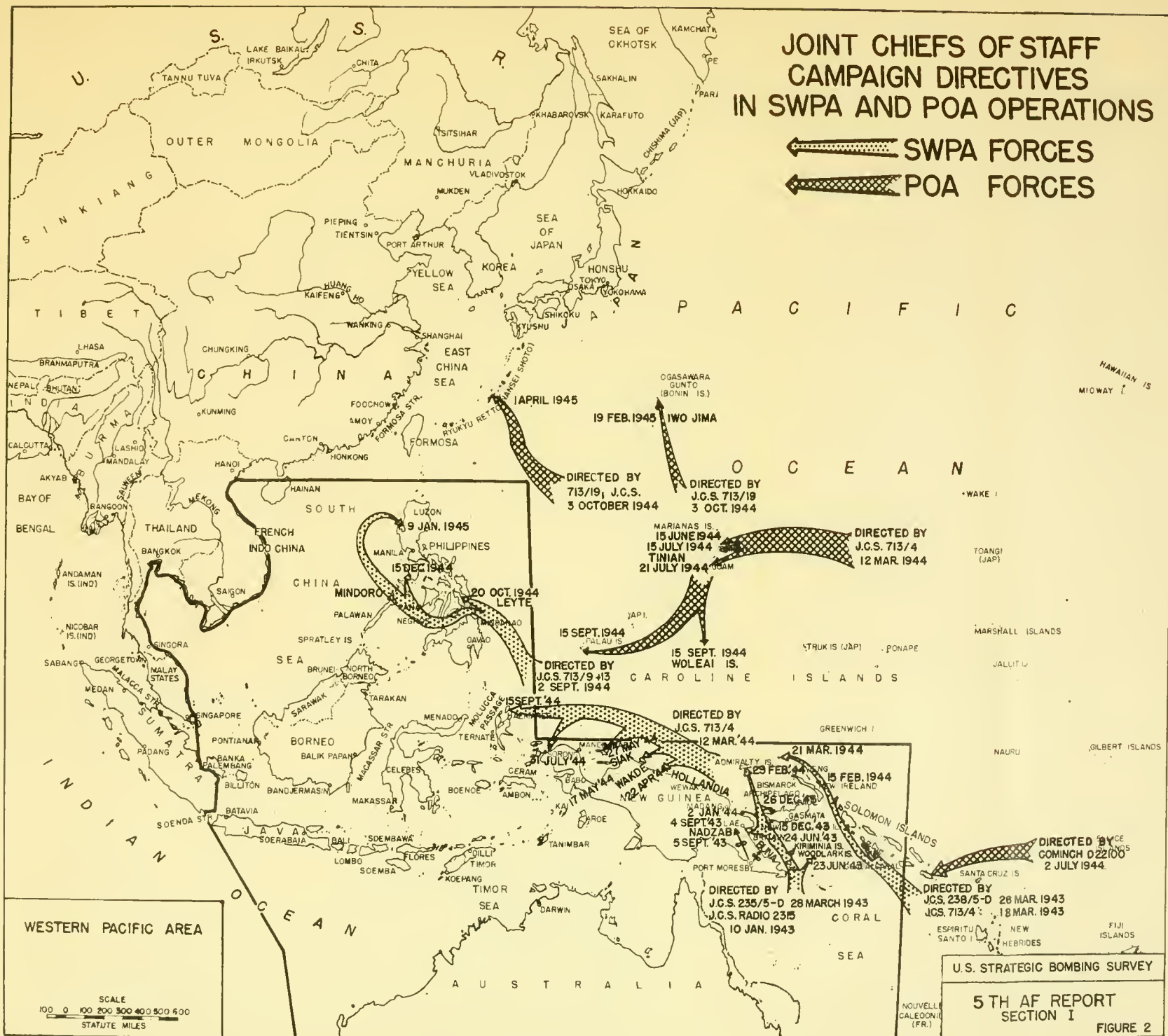
U.S. STRATEGIC BOMBING SURVEY

5TH AF REPORT
(SECTION I)

FIGURE 1

JOINT CHIEFS OF STAFF CAMPAIGN DIRECTIVES IN SWPA AND POA OPERATIONS

← SWPA FORCES
← POA FORCES



AIR-GROUND-NAVAL TEAM, SWPA

Before detailing the history of the Fifth AF in its operations against the Japanese it is advisable to show the role the Air Forces played in the combined all-force team play organized by Gen. Douglas MacArthur. Essentially the structure was of three forces, ground, naval and air in combination, operating their specialties in weapons to destroy a common enemy objective in order to create a new Allied base for repeated operations.

Naval units permanently assigned to the SWPA were small until late 1944 and battle grounds were restricted prior to the Luzon campaign. The air forces, therefore, were called upon for more extended operations than would have been normal under other circumstances.

Therefore, in addition to the standard destruction of the enemy normally accomplished by air action, the Fifth AF adopted operations designed to readjust quickly to tactical situations occurring from the all-out aggressive action of forces operating on little or no reserve. This led to tactics and methods of controlling aircraft to make them all-purpose. In a war of maneuver a high degree of "force flexibility" is important, a point adopted as policy by the Fifth AF. The history of the Fifth should be inspected for such actions as the four-day battle between aircraft and a large Japanese convoy in the Bismarck Sea; an encounter where a single cannon equipped B-25 mastered a destroyer in a gun fight; the isolation of New Britain and New Ireland by combined air action; the preinvasion preparations at Gloucester, Biak, and Corregidor where bomb tonnage almost alone reduced prepared beach defenses; the use of fighter-bombers at Subic Bay and the Yamashita line to destroy gun positions uninterdictable by artillery fire; the establishment of air and ground bases at Tsilli-Tsilli, Wanagela, Dobodura, and Laoag by air transport; the supply of food, fuel and ammunition to scattered troops cut off from the beachhead by terrain in almost every ground action; and other points which make the chronology of the Fifth's air effort a constant succession of varied events.

In planning tri-force operations the most complex problem was the proper segregation of

forces to permit simultaneous operations. The air-ground team became very cooperative and, after initial difficulties imposed by communications in jungle warfare, the entire Air Force stood in support of ground action when required. Fifth AF support to the Sixth Army was climaxed at Ormoc and Luzon. Air-naval coordination was particularly effective with PT boats and later, in 1945, with submarines, but generally it was found best to keep naval surface force operations apart from land-based air operations, due principally to communications requirements of the naval forces. When beachhead operations were supported by naval carrier-based aircraft the preliminary period was of naval responsibility after arriving at the operation. No appreciable difference in operating techniques existed but basic lack of liaison to effect the necessary coordination made such joint operations impracticable. The full employment at one time of the forces available for an operation was never feasible and hence required elaborate and detailed schedules of separating forces, both in time and distance. Despite this, the preinvasion cooperation between the Fifth Air Force and the Third and Seventh Fleet units was effective and without serious difficulty. The operation to seize Legaspi in Luzon is a small example of this.³⁰¹
_{Sydney}

In combined operations the interval between successive operations was minutely calculated to save every day of the Allied advance. The absolute necessity of the Air Forces to secure, in advance of combined operations, air supremacy in Amphibious Force operating areas, the preinvasion isolation of the battlefield and the destruction of beachhead defenses required daily maximum effort throughout the period of the war.

Throughout the war in the SWPA, amphibious operations were supported entirely by land-based aircraft except in a few cases where the objective was beyond supporting range of the land-based fighters. Hollandia, Morotai, Leyte and Linguyan Gulf landings were furnished close air support by CVEs of the 7th Fleet for a few days until a fighter strip could be constructed ashore and land-based aircraft could take over and allow the CVEs to withdraw in order to refuel, replenish their aviation

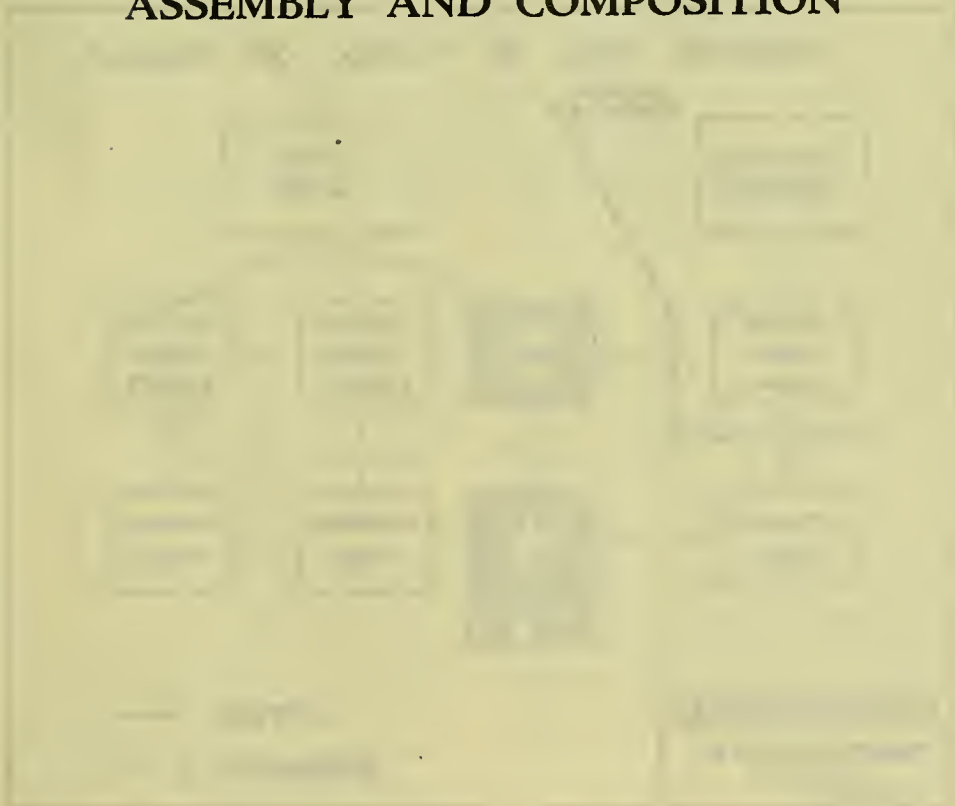
gasoline and bombs and rest their crews. At this time responsibility for air support of the beachhead and the ground forces would pass to the Allied Air Force Commander. GHQ SWPA plans in general called for construction of this initial fighter strip by D plus 5 to D plus 10 as the 7th Fleet never had sufficient carrier strength to maintain continuous operations for longer periods.

The historical notes and statistics in this report cannot, as a description of one air force,

adequately emphasize the complete coordination of Southwest Pacific forces which was responsible for our successes. The Air Force part in this achievement is on the records now being assembled. The presentation herewith is primarily an outline to point out the pattern of events and the objectives of the Fifth's leaders, Generals Kenney and Whitehead. The complete story must wait the digestion of statistical facts and the issuance of a combined Allied, Army, Navy and Air history.

SECTION II

ASSEMBLY AND COMPOSITION

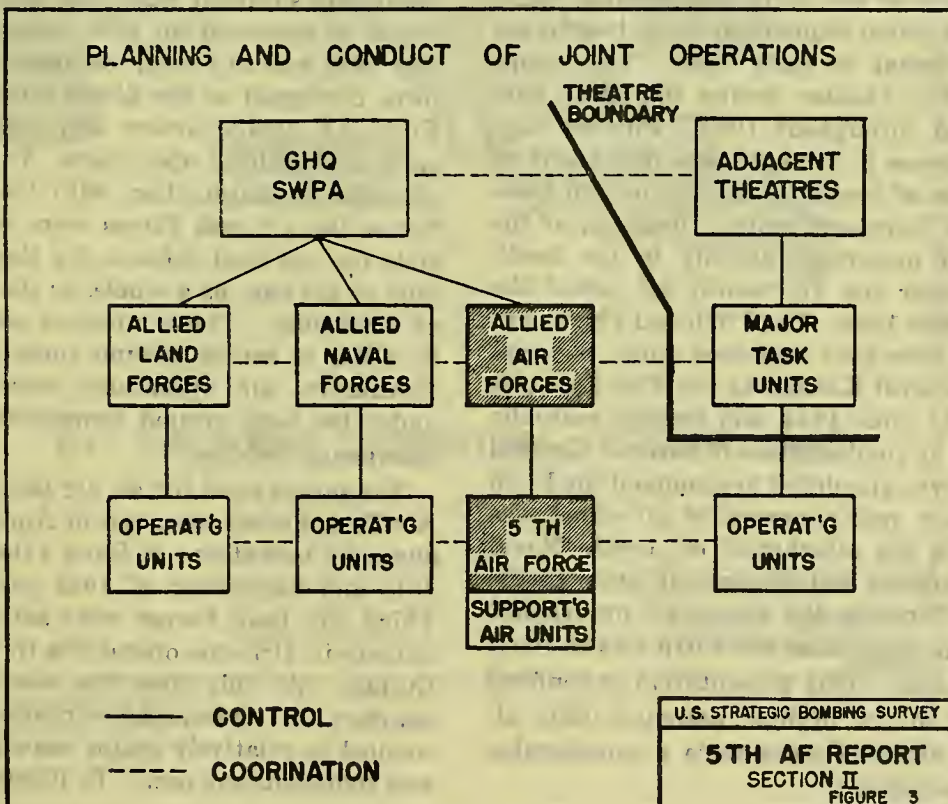


ROLE OF FIFTH AF IN SWPA

The campaign of the Fifth AF in operations against the Japanese was confined primarily to the Southwest Pacific Area and to preparing, along with other Army forces, for the final assault on Japan. Maximum effort of all friendly forces against a single enemy objective was a keynote of theater policy. This policy, employed along a single line of attack, required full coordination of air and surface operations. Limitations of operating space and of forces on hand required concentration of means and brought the GHQ policy that the American Sixth Army, Seventh Fleet and Fifth AF would be the "spearhead" forces. The Fifth AF became by the turn of events the largest operator of land-based aircraft in the Pacific except for B-29s. This accumulation of air power under a single command provides the student of military history with an excellent example of a series of highly successful campaigns in which air operations were coequal and coordinate with those of ground and naval forces.

The policy of Gen. Douglas MacArthur to operate his major forces as a composite team of land, naval and air forces, retained each

force as a complete entity and provided a concentration of its means. With the exception of anti-submarine units and certain transport aircraft all tactical aircraft in the SWPA were under the control of Allied Air Force. In turn this required that the Air Force have full ability to support compatriot arms while continuously engaging the enemy on the "Air Front." The Fifth AF was therefore "all purpose" in its composition. It was essentially a field operating unit, provided with the greatest flexibility and with freedom from administrative and service burdens. The composing of many air forces into Allied Air Force by Gen. George C. Kenney developed the policy of assigning one major air force organization to achieve one major objective. The composition of the selected air force or "Assault Air Force" as it was termed, was determined by the requirements of the assigned mission. The composition of forces therefore was changing constantly as bases shifted and forces reallocated. Emphasis was placed on complete and responsible coordination between equal levels of command. Figure 3 illustrates this.



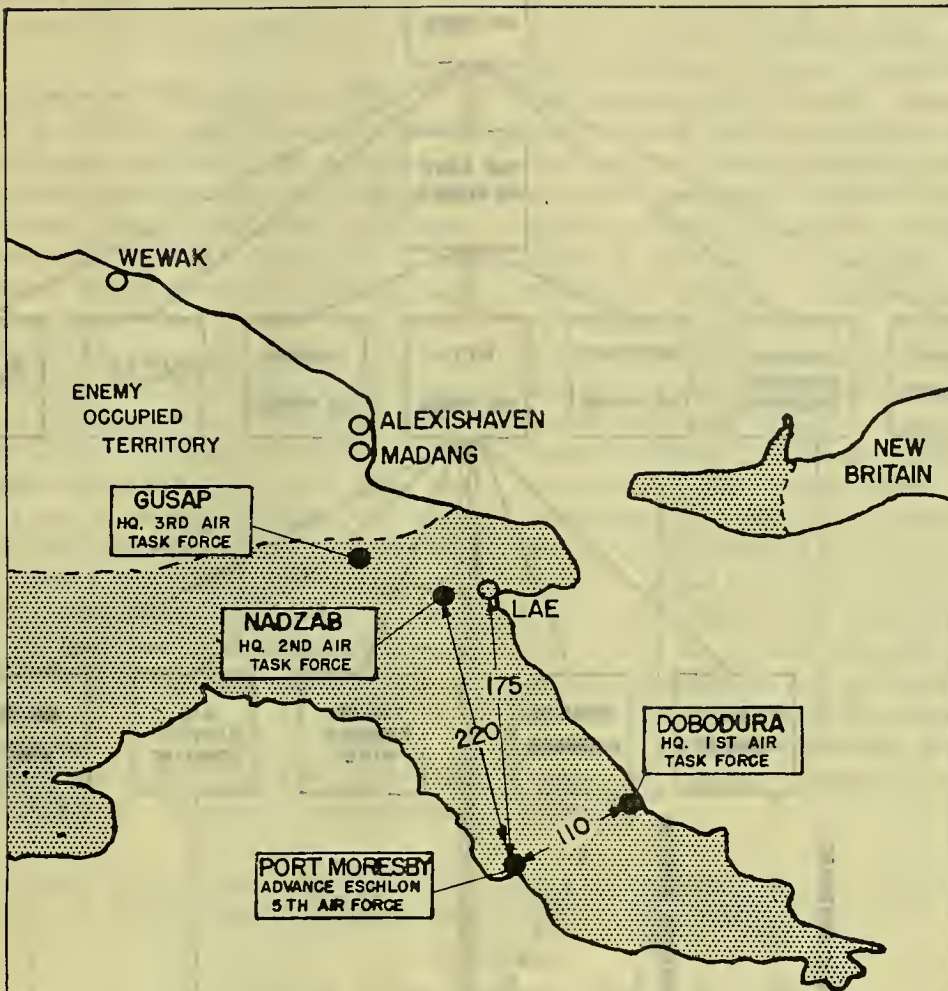
In April 1942 General MacArthur had formed an Allied Air Force under the command of Lt. Gen. George H. Brett. This was a composite organization of Royal Australian Air Force squadrons, a few Netherlands East Indies squadrons and remnants of the American Far East Air Force formerly in the Philippines. These units had been evacuated to Australia and Port Moresby, New Guinea, and were operating in combination with each other wherever service of any sort could be found. In July 1942, Lieutenant General Brett was succeeded by Gen. George C. Kenney. On 3 September 1942 authority was received to activate the Fifth AF from existing American AAF units in the Theater. Command was assumed by General Kenney in addition to his position as commander, Allied Air Force. Forward operations were delegated to Lieut. Gen. Ennis Whitehead as deputy commander. The operational RAAF and Dutch units were combined under Air Vice-Marshal D. W. Bostock's RAAF Command. National and service entity was retained throughout the war by similar subdivisions under Allied Air Force.

The growth of the Fifth AF resulted primarily from a troop requisition submitted to the War Department in early 1943. The troops arrived in the Theater during the latter part of 1943 and throughout 1944. Further substantial increase in strength was dependent on the cessation of hostilities in Europe and redeployment of European units. However, by the cessation of major air activity in the South Pacific Theater the Thirteenth AF joined the SWPA in June 1944. The Fifth and Thirteenth Air Forces were then combined under the command of General Kenney as the Far East Air Forces on 15 June 1944, and became mutually supporting by combinations of forces. General Whitehead was appointed to command the Fifth AF. Further reinforcement of air effort was derived with the attachment of certain Naval search squadrons and Marine air units to the Fifth Air Force as the campaign progressed. In almost all operations the Fifth was in itself an Allied force. This presentation is confined principally to the organic assigned units although its attached units were a considerable factor in operations.

Air Task Forces

The Pacific being essentially a theater of maneuver, the ability to effectively shift operational command from place to place was of vital importance. The initial growth of newly acquired beachheads required on-the-spot supervision. The steady increase of sorties from a new base would eventually demand a command headquarters approaching the Air Force Headquarters level. It was not feasible to suddenly close a large headquarters and quickly move it to a new location since transportation and duplicate equipment were not available. Furthermore, air operations were continuous and the movement of communications was critical at any stage. To meet this problem three command echelons called air task forces were formed. Essentially they were standard air force headquarters units less administrative sections. Their mission was the establishment of air force units at newly acquired bases or beachheads, the conduct of air operations directly affecting action at the new base, and development of the airdrome areas for operations. The Fifth AF Headquarters would eventually supplant them and the Task Forces would be prepared for new operations. If the new base was to remain detached, the air task force continued as the direct representative of Fifth AF Headquarters and acted independently only in local operations. In development of bases in conjunction with land and naval forces the air task forces were never responsible for the local defense, for the logistic support of the base as a whole, or the construction of airdromes. These missions were delegated by GHQ to senior ground force commanders. Contrarily, air operations were not placed under the local ground commander except for emergency defense.

The initial need for an air task force (First Air Task Force) occurred in April 1943, to inaugurate operations at Buna (Dobodura). In July and September of 1943 the Second and Third Air Task Forces were activated to participate in airborne operations in Eastern New Guinea. At this time the use of air headquarters in widespread airborne operations, coupled to relatively major sea-supplied bases, was comparatively new. To illustrate the flexi-



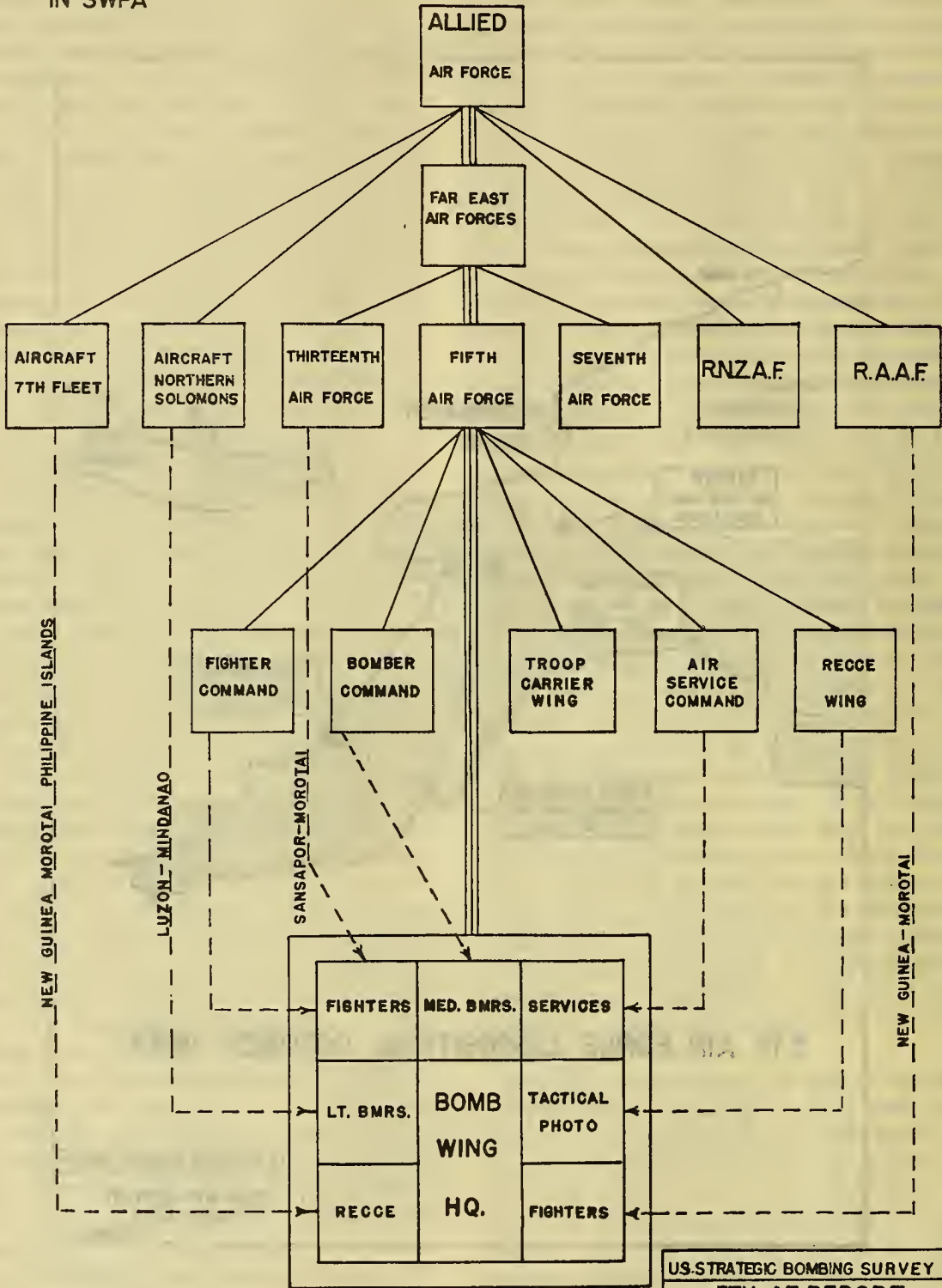
5th AIR FORCE DISPOSITION, OCTOBER 1943

U.S. STRATEGIC BOMBING SURVEY

5TH AF REPORT
(SECTION II)

FIGURE 4

ROLE OF 5TH AF
IN SWPA



US STRATEGIC BOMBING SURVEY

5TH AF REPORT

SECTION II

FIGURE 5

ble manner in which these task forces were used in October 1943 the geographical locations are given in Figure 4. Sea distances from Port Moresby (Fifth AF Hq.) to subordinate task forces required radio communication, and reliance on aircraft for transportation of critical supplies.

Task Forces Continued Throughout the War

The need to continue task forces for future operations became apparent. As a means of supplying authorized personnel and equipment the three bomb wings (308, 309 and 310) authorized for the Fifth AF were used in lieu of their normal role to cover partially the task force requirements. Task forces were henceforward designated as bomb wings. Tactical and service units were attached to bomb wings according to the mission and length of active operations. Units were selected from all Allied air commands when Fifth AF units were not available. Lack of staging facilities and continuous operation sometimes made the assembly of Task Forces a very difficult achievement. The method of assembling these forces is given in Figure 5. Bomb wing headquarters were not involved in the administration of these units.

Chain of Command

The organization of the Fifth AF and its subordinate commands followed conventional

structure. The arrangement was considered the simplest method of administration, and the accountability of supply. It was not entirely suitable for operations due to the inability to maintain the integrity of commands as units moved forward. This difficulty was solved by differentiating between "operational control" and "assignment" of units. Essentially assignment carried the responsibility of administration and for nonexpendable supplies for units, whereas operational control referred to the control of units in combat, with the responsibility of tactical direction and furnishing of expendable supplies. Operational control of a unit was normally vested in the senior air command conducting operations in the immediate area of the unit and greatly reduced communications and staff orders. Operational control varied with the tactical situation and could be redesignated on a daily basis if necessary. Administrative channels, however, remained standard regardless of the location of units. It should be noted that such frequent shift in tactical responsibility was detrimental to maintaining any large scale teamwork between subordinate commands, and to the maintenance of records, but it was largely responsible for the ability to maintain flexibility in the arrangements of forces needed for operational efficiency.

FIFTH AIR FORCE COMMANDS AND TACTICAL STRENGTH ACTIVATED IN THE FIELD OF OPERATIONS, SWPA, 3 SEPTEMBER 1942

COMMANDERS

Gen. George C. Kenney, 3 September 1942-15 June 1944
 Lt. Gen. Ennis Whitehead, 15 June 1944-

SUBORDINATE COMMANDS (ACTIVATION DATE)

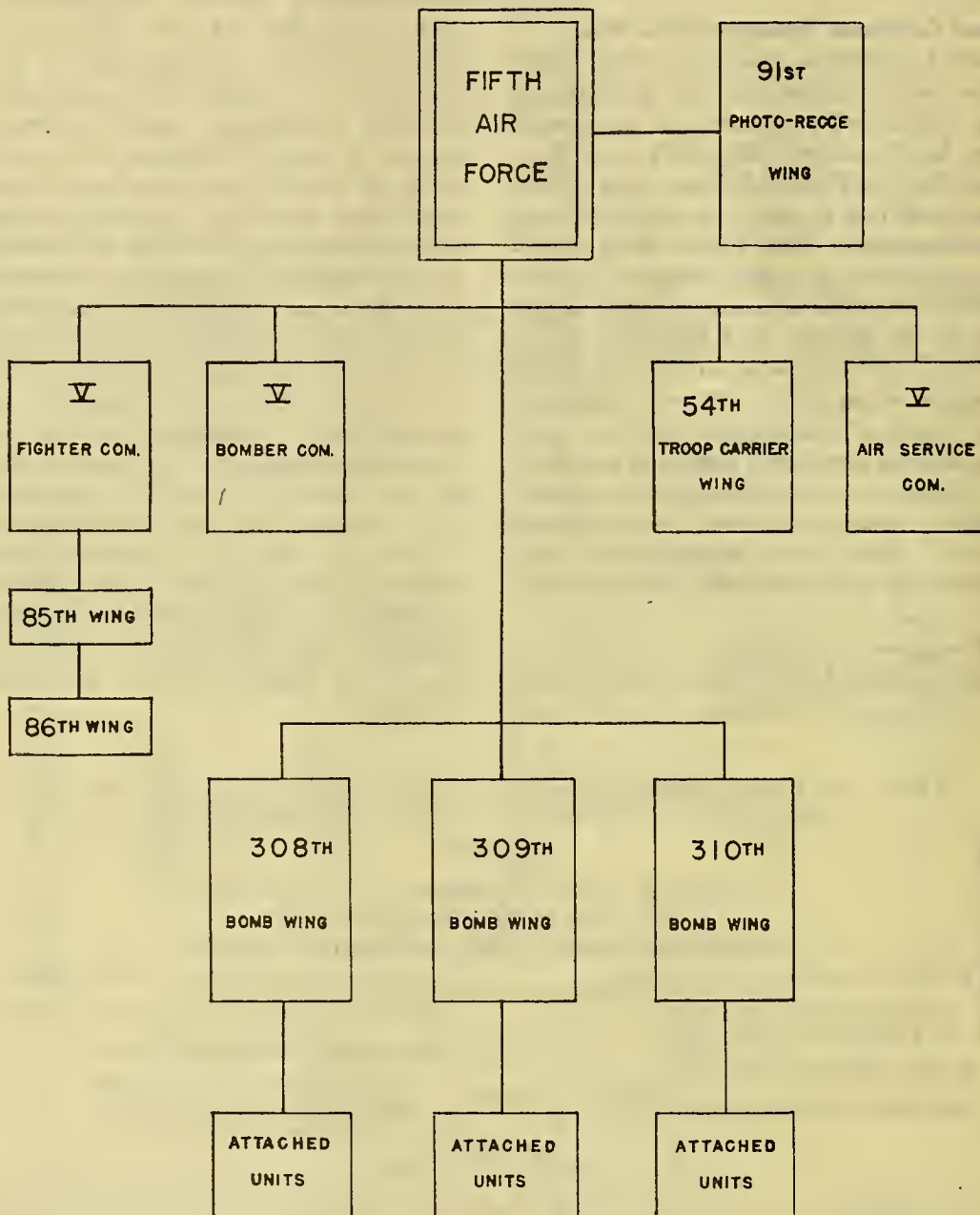
V FIGHTER COMMAND (11 Nov 1942).	54th TROOP CARRIER WING (13 Mar 1943).
85 Fighter Wing (Jan 1944).	91st PHOTO RECONNAISSANCE WING (20 Oct 1943).
86 Fighter Wing (Mar 1944).	TASK FORCE HEADQUARTERS (AIR).
V BOMBER COMMAND (5 Sep 1942).	308th Bomb Wing (Apr 1943).
V AIR SERVICE COMMAND (Jul 1943).	309th Bomb Wing (Jul 1943).
	310th Bomb Wing (Sep 1943).

TACTICAL GROUPS

GROUPS	JUL 1942	JAN 1943	JUL 1943	JAN 1944	JUL 1944	JAN 1945	JUL 1945
FIGHTERS (3 SQD)	3	3	5	6	6	6	6
BOMBERS (4 SQD)	5	5	7	9	8	9	9
RECONN AND PHOTO (4 SQD)	¼	¼	¼	2	2	2	2
TRANSPORTS (4 SQD)		2	3	4	4	5	5
NIGHT FIGHTER (3 SQD)				¾	¾	1	1
TOTAL GROUPS	8¼	10¼	15¼	21¾	20¾	23	23

SOURCE: AFSSC-1C

STANDARD COMMAND CHANNELS
5TH AF



U.S. STRATEGIC BOMBING SURVEY
5TH AF REPORT
SECTION II
FIGURE 6

5TH AF TACTICAL UNIT HISTORY

UNIT	1942							1943							1944							1945									
	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	M	J	J	A	M	J	J
FIGHTER GROUPS(3 SQ)																															
35TH																															
49TH																															
BTH																															
348TH																															
475TH																															
58TH																															
BOMBER GROUPS(4 SQ)																															
3RD																															
19TH																															
43RD																															
38TH																															
22ND																															
90TH																															
380TH																															
345TH																															
312TH																															
417TH																															
RECCE & PHOTO GROUPS (3 SQ)																															
6TH (RCN)																															
71ST (RCN TACT)																															
TRANSPORT GROUPS (4 SQ)																															
374TH (TC)																															
317TH (TC)																															
375TH (TC)																															
433RD (TC)																															
2ND (CC)																															
NIGHT FIGHTER (3 SQ)																															
(NO PARENT GROUP)																															

SOURCE: AAF FORM 127

NOTE: SEVERAL SEPARATE SQUADRONS ARE NOT SHOWN IN ABOVE SUMMARY.

5TH AF SERVICE UNITS AS OF 18 AUGUST 1945

TYPE OF UNIT	NO. OF UNITS	PERSONNEL STRENGTH	TYPE OF UNIT	NO. OF UNITS	PERSONNEL STRENGTH	TYPE OF UNIT	NO. OF UNITS	PERSONNEL STRENGTH	TOTAL STRENGTH		
										Q M TRK CO AVN	Q M TRK DET
AIR CARGO CONT SQ	1	229	ENGR MAINT CO	1	187	Q M TRK CO AVN	24	2,347			
AIR CARGO RE/SUPPLY SQ	5	896	ENGR PETL DIST CO	1	223	Q M TRK DET	3	72			
AIR COMB SQ AMPH	1	116	EMERG TOPO CO AVN	1	155	RADAR CALIB DET	2	76			
AIRDROME SQ	21	4,608	FIGHTER CONT SQ	4	1,082	RADIO SQ DET	6	143			
AIR ENGRS SQ ASG	2	453	MALARIA CONT & SURV DET 12	2	135	SIG A W DET	69	2,067			
AIR MATERIEL SQ	2	248	MEDICAL EWAC SQ	2	169	SIG CO S G	10	946			
AIR SERVICE SQ	23	5,234	MEDICAL DISP AVN	1	28	SIG H CONST CO AVN	4	608			
AVIATION SQ	2	503	M P AVN CO	8	1,113	SIG SERV CO AVN	2	302			
AVIATION UTIL CO	6	678	M P AVN DET	1	26	SIG SERV BN CO	4	354			
CHEMICAL CO AO	5	530	ORD BOMB DIS SQ	3	20	SIG CO W G	3	526			
CHEMICAL MAINT CO	1	100	ORD S/M CO AVN	23	1,557	TAG AIR COM SQ	2	428			
ENGR AVN BN	8	6,095	Q M GO ASG	12	884	VET DET AVN	1	18			
ENGR BASE EQUIP CO	1	164	Q M DISP CO AVN	1	32	TOTAL STRENGTH		33,392			

SOURCE: FEAF STATION LIST.
AFSSC

5TH AF 1ST LINE AIRCRAFT ON HAND BY TYPE

JUNE 1942 - AUGUST 1945

NUMBER OF AIRCRAFT

2,500

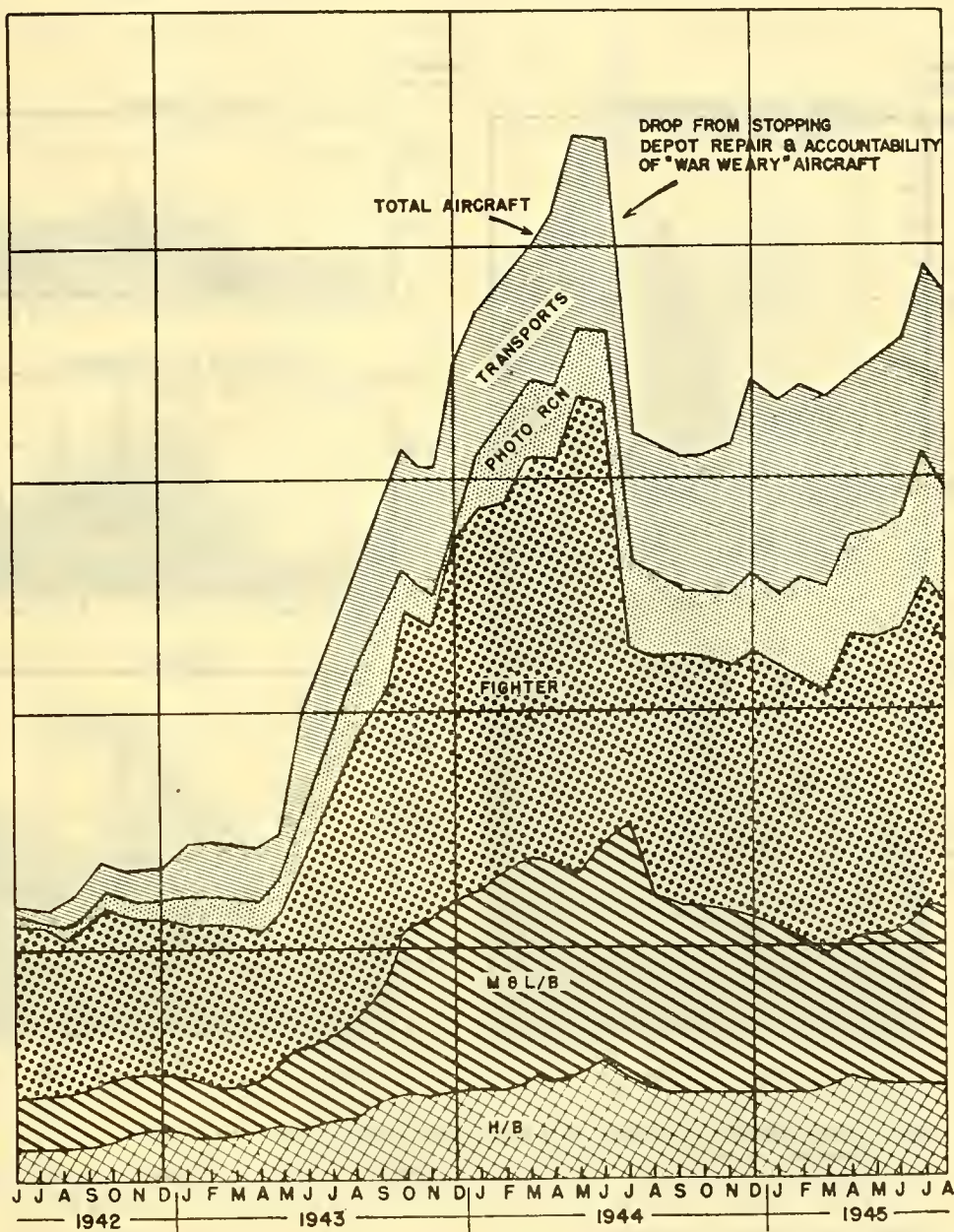
2,000

1,500

1,000

500

0



NOTE: ON HAND REPRESENTS ALL COMBAT AND TRANSPORT TYPE AIRCRAFT IN THE FIFTH AIR FORCE.

SOURCE: FEAF, AIRCRAFT STATUS REPORT.
AFSSC

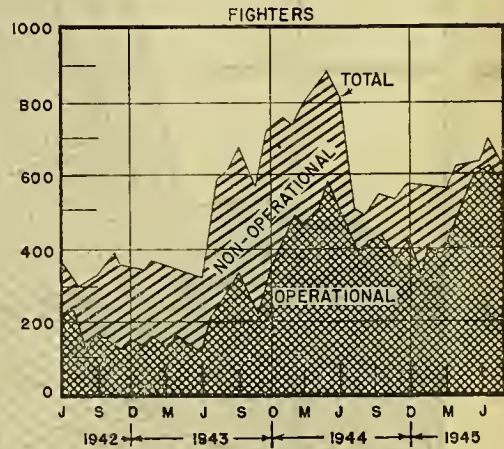
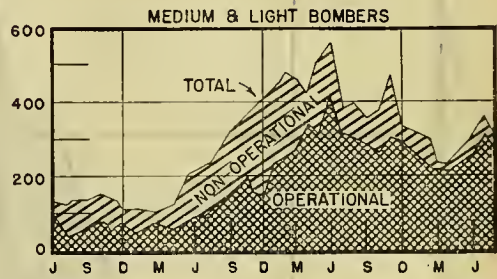
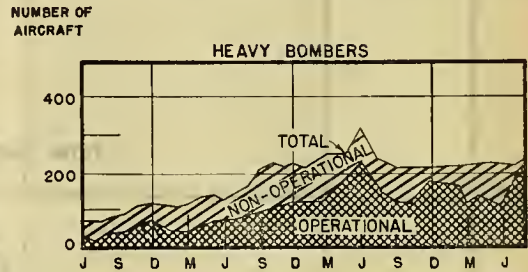
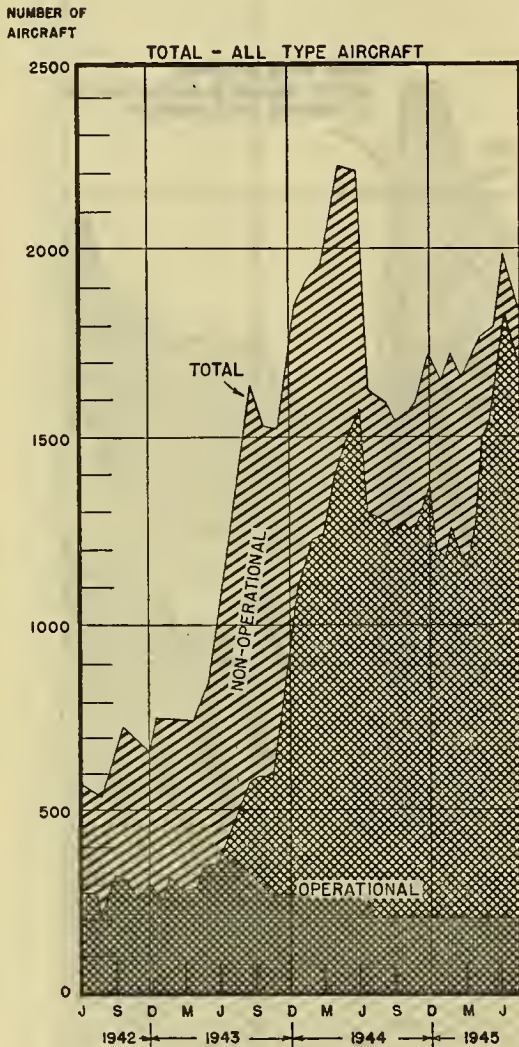
U.S. STRATEGIC BOMBING SURVEY

5TH AF REPORT

(SECTION II)

FIGURE 8

5TH AF, FIRST LINE AIRCRAFT ON HAND AND OPERATIONAL BY MAJOR TYPE AIRCRAFT JUNE 1942 - AUGUST 1945



NOTE: ON HAND REPRESENTS ALL COMBAT AND TRANSPORT TYPE AIRCRAFT IN THE FIFTH AIR FORCE.
OPERATIONAL MEANS READY FOR COMBAT.
"TOTAL-ALL TYPE AIRCRAFT" INCLUDES BOMBERS, FIGHTERS, TRANSPORTS, AND PHOTO AND RECONNAISSANCE AIRCRAFT.

SOURCE: FEAF, AIRCRAFT STATUS REPORT.
AFSSC

U.S. STRATEGIC BOMBING SURVEY

5TH AF REPORT
SECTION 2

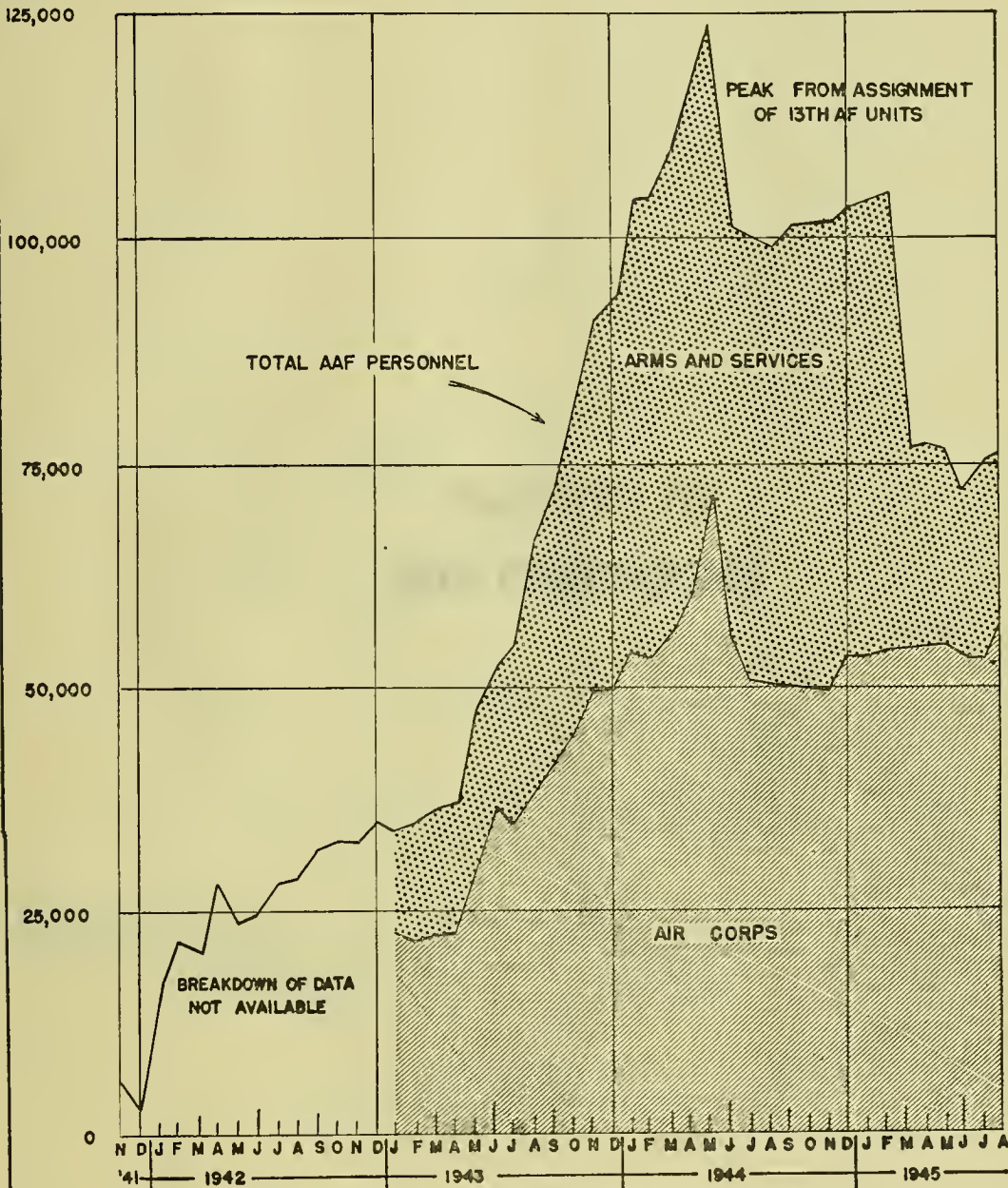
FIGURE 9

AAF PERSONNEL STRENGTH OF FIFTH AIR FORCE

BY AIR CORPS AND ARMS AND SERVICES

NOVEMBER 1941 - AUGUST 1945

NUMBER OF PERSONNEL



NOTE: ASWAAF INCLUDES ONLY PERSONNEL IN ASWAAF UNITS, ARMS AND SERVICES SECTIONS WITH AIR CORPS UNITS NOT AVAILABLE BY COMMAND AFTER JUNE 1945. DATA BY ARMS AND SERVICES NOT AVAILABLE FOR PERIOD NOVEMBER 1941 THRU DECEMBER 1942.

SOURCE: AFSSC FORM 127

U.S. STRATEGIC BOMBING SURVEY

5TH AF REPORT

(SECTION II)

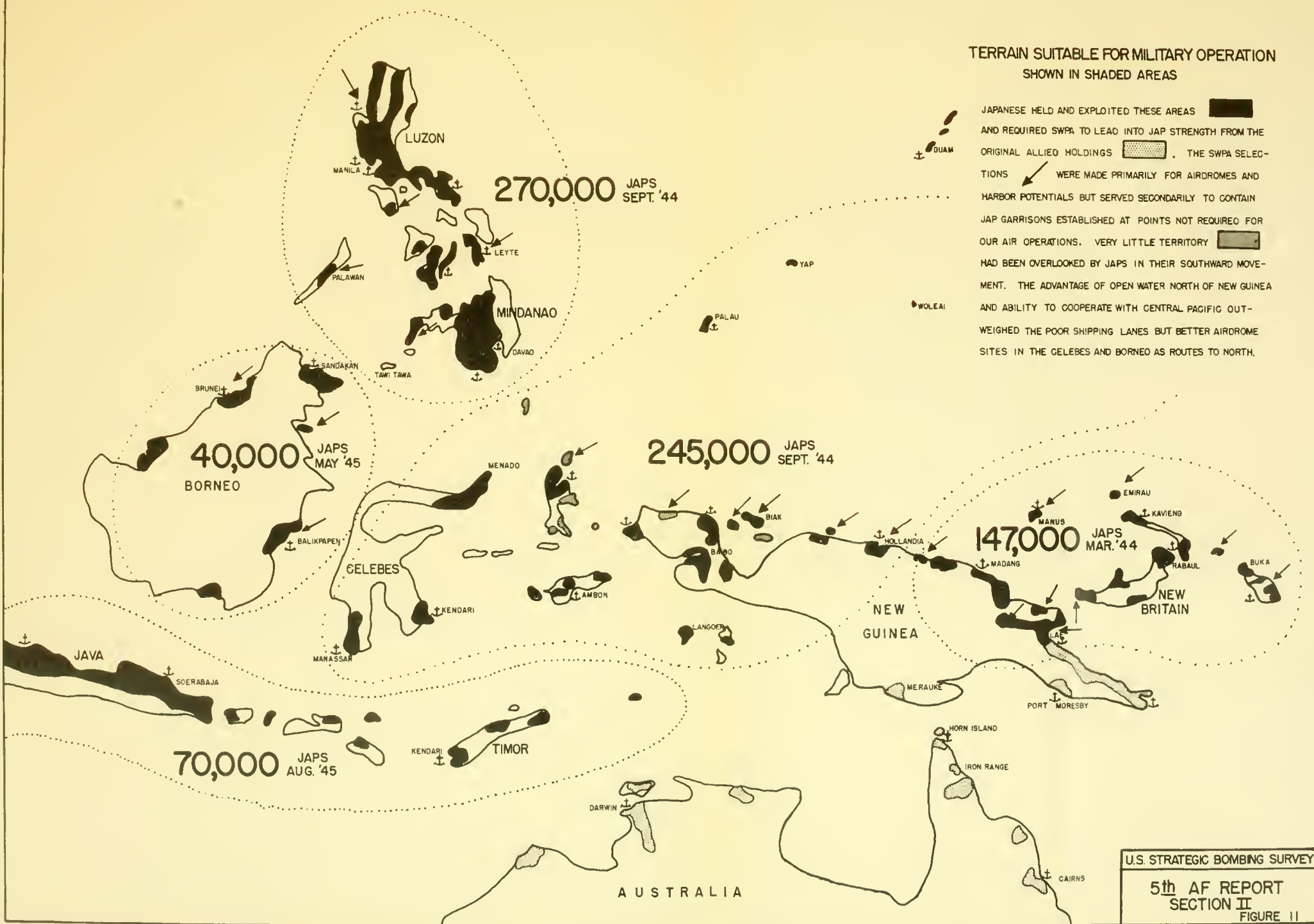
FIGURE 10



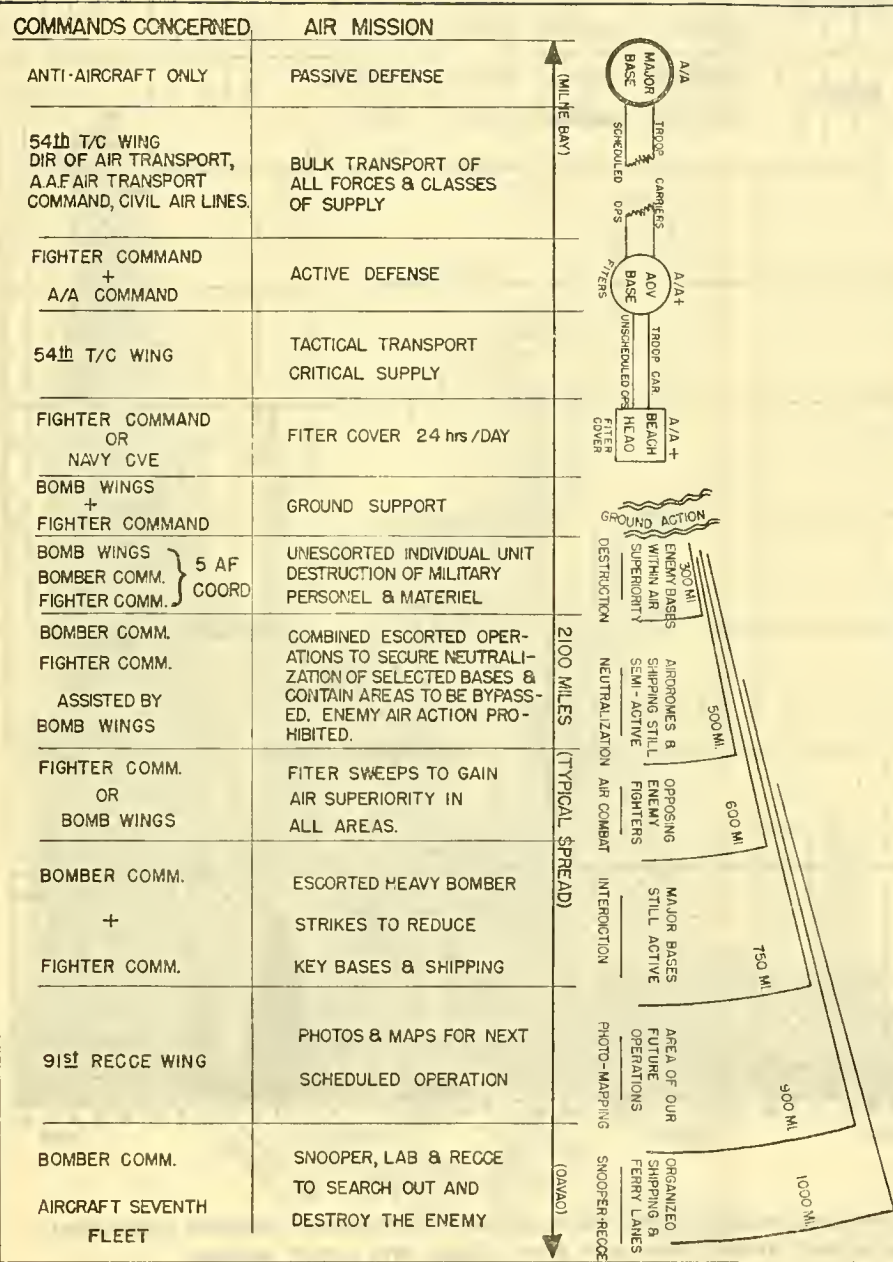
SECTION III
AIR CAMPAIGNS

TERRAIN SUITABLE FOR MILITARY OPERATION
SHOWN IN SHADED AREAS

JAPANESE HELD AND EXPLOITED THESE AREAS [Solid Black] AND REQUIRED SWPA TO LEAD INTO JAP STRENGTH FROM THE ORIGINAL ALLIED HOLDINGS [Hatched]. THE SWPA SELECTIONS [Dotted] WERE MADE PRIMARILY FOR AIRDROMES AND HARBOR POTENTIALS BUT SERVED SECONDARILY TO CONTAIN JAP GARRISONS ESTABLISHED AT POINTS NOT REQUIRED FOR OUR AIR OPERATIONS. VERY LITTLE TERRITORY [White] HAD BEEN OVERLOOKED BY JAPS IN THEIR SOUTHWARD MOVEMENT. THE ADVANTAGE OF OPEN WATER NORTH OF NEW GUINEA AND ABILITY TO COOPERATE WITH CENTRAL PACIFIC OUTWEIGHED THE POOR SHIPPING LANES BUT BETTER AIRDROME SITES IN THE CELEBES AND BORNEO AS ROUTES TO NORTH.



**TYPICAL MISSIONS OF 5th AIR FORCE
(TYPICAL)
COMPOSITE DIAGRAM OF CONTINUOUS DAILY MISSIONS LAST QTR. 1944**



U.S. STRATEGIC BOMBING SURVEY
 5th AF REPORT
 SECTION II
 FIGURE 12

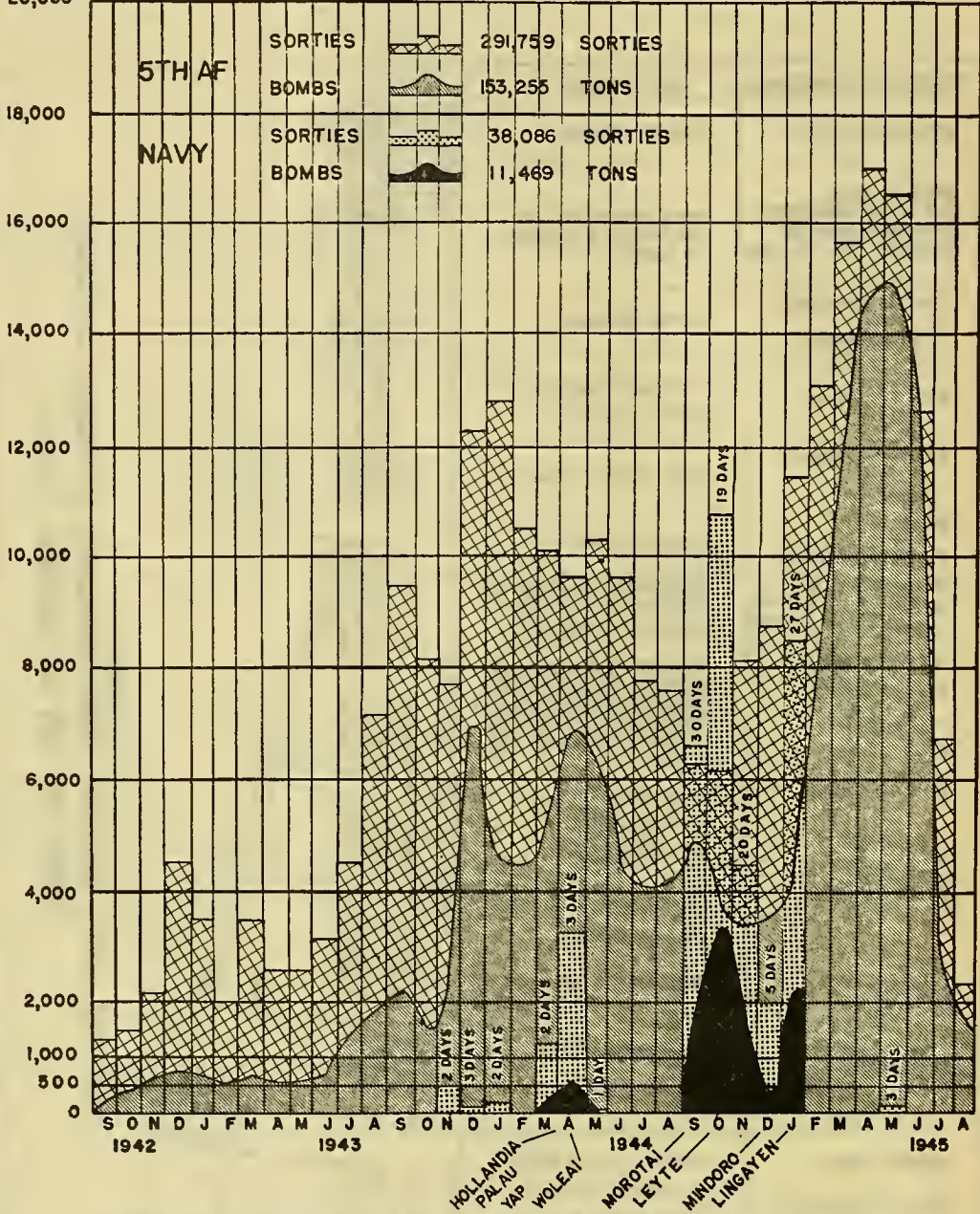
DISTRIBUTION OF EFFORT

TOTAL ACTION SORTIES & TONS OF BOMBS DROPPED 5TH AF

AND

SUPPORTING OPS TO SWPA BY CARRIER BASED AIR

TONS &
SORTIES
20,000

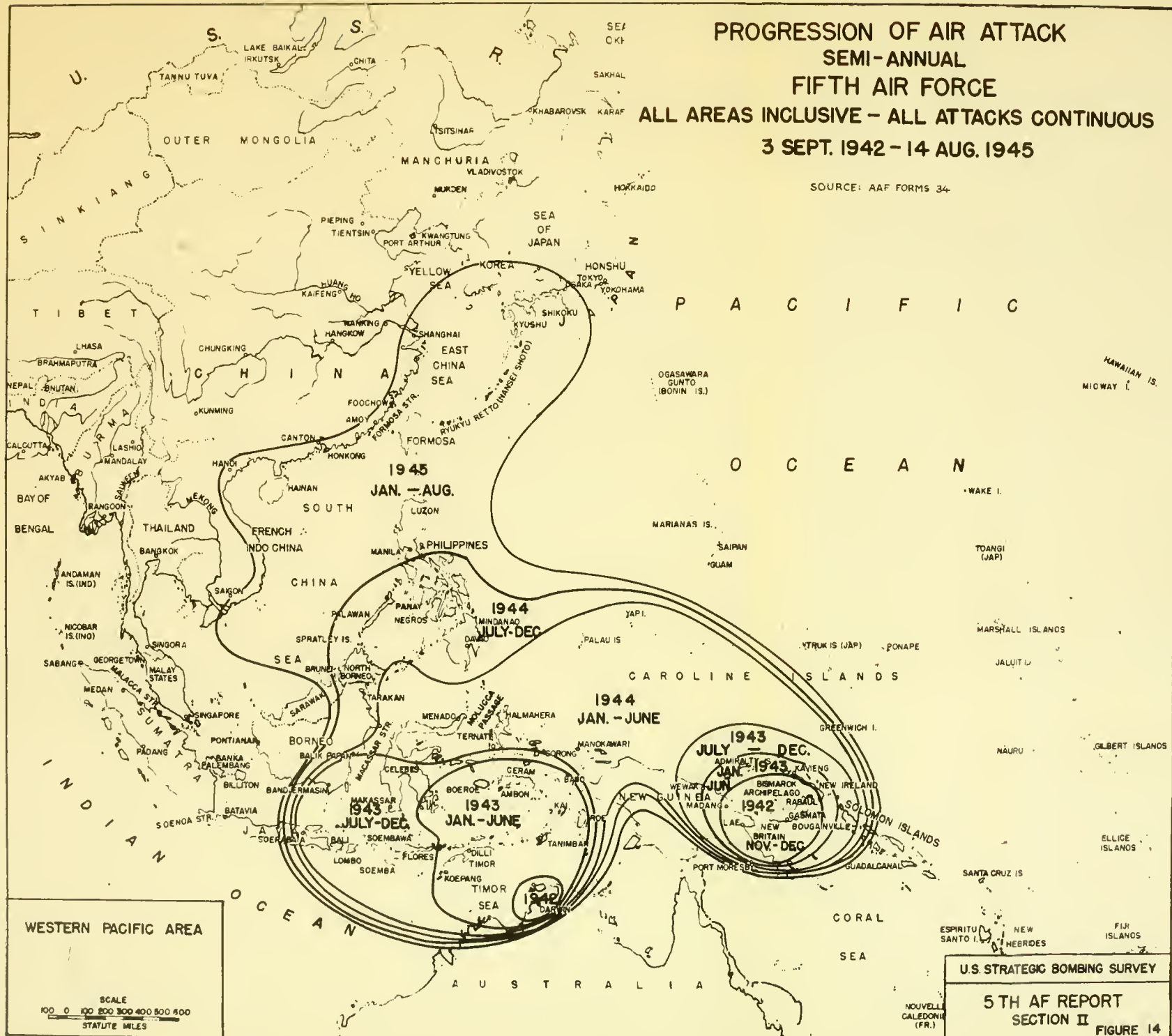


FIFTH AF REPORT INCLUDES RECCE, FIGHTER, & BOMBERS, ONLY AIRCRAFT REACHING TARGET, FROM FORMS 34, NAVY REPORT FROM DRAFT STUDY U.S.S.B.S. WITH SOURCE UNKNOWN, BOMB TONNAGE NOT TO BE USED AS AN INDEX OF EFFICIENCY OF ATTACK.

U.S. STRATEGIC BOMBING SURVEY
5TH AF REPORT
(SECTION II)
FIGURE 13

**PROGRESSION OF AIR ATTACK
SEMI-ANNUAL
FIFTH AIR FORCE
ALL AREAS INCLUSIVE - ALL ATTACKS CONTINUOUS
3 SEPT. 1942 - 14 AUG. 1945**

SOURCE: AAF FORMS 34-



WESTERN PACIFIC AREA

SCALE
100 0 100 200 300 400 500 600
STATUTE MILES

U.S. STRATEGIC BOMBING SURVEY

5TH AF REPORT
SECTION II

FIGURE 14

EXTRACT—USSBS—DRAFT REPORT CARRIER BASED AIRCRAFT ACTION
SUMMARY—PACIFIC WAR

Raid, battle, or campaign Target area, type of carrier	Dates of action	Action sorties	Tons of bombs on targets	Raid, battle, or campaign Target area, type of carrier	Dates of action	Action sorties	Tons of bombs on targets
<i>1942—1943</i>							
First Rabaul Strike	11/5	97	25	Ryukyus area	10/10—10/16	1,538	567
Second Rabaul Strike . . .	11/11	359	97	Formosa area	10/12—10/16	2,807	963
First Kavieng raid	12/25/43	103	35	Philippines, CV, CVL . .	10/11—10/30	4,100	1,276
				Philippines, CVE	10/17—10/29	2,484	524
<i>1944</i>							
Second Kavieng raid	1/1/44	88	38	Philippines, CV—CVL . .	11/5—11/25	4,291	1,462
Third Kavieng raid	1/4/44	90	35	Western Carolines	11/22	98	46
Palau, Yap, Woleai	3/30—4/1	2,172	712	Luzon, fast carries	12/14—12/16	1,852	330
Hollandia—Aitape CV— CVL	4/21—4/26	2,314	713	Visayas, CVs	12/13—12/17	210	3
Hollandia—Aitape CVE . . .	4/22—4/23	227	117	<i>1945</i>			
Soerabaja raid	5/17	55	20	Philippines, CV—CVL . . .	1/6—1/7	1,426	288
Philippines, CV—CVL	9/9—9/24	6,025	2,113	Philippines, CVE	1/4—1/30	1,932	466
Halmahera—Morotai	9/15—10/3	423	56	Formosa	1/3—1/21	2,894	834
Celebes, Borneo	9/15	34	0	Indo China	1/12	910	324
				China	1/15—1/16	799	235
				Ryukyus	1/22	676	161
				Balikpapan	7/1—7/3	82	29

Date	Description	Debit	Credit	Balance	Remarks
1890	Jan 1				Balance forward
	Jan 15				
	Jan 30				
	Feb 15				
	Feb 30				
	Mar 15				
	Mar 30				
	Apr 15				
	Apr 30				
	May 15				
	May 30				
	Jun 15				
	Jun 30				
	Jul 15				
	Jul 30				
	Aug 15				
	Aug 30				
	Sep 15				
	Sep 30				
	Oct 15				
	Oct 30				
	Nov 15				
	Nov 30				
	Dec 15				
	Dec 31				

MASTER MAPS OF SWPA™ CAMPAIGN

LEGEND

- PRINCIPAL JAPANESE BASES
- SECONDARY JAPANESE BASES
- ⚓ JAPANESE HARBORS
- JAPANESE SHIPPING LANE
- - - SHIPPING LANE CUT BY 5TH AF
- - - JAPANESE PERIMETER SWPA JULY 1942
- ↘ JAPANESE AIR ATTACK
- ✳ CRITICAL ACTION
- ✳ JAPANESE BASE OR FORCE NEUTRALIZED BY 5TH AF
- ★ ALLIED LANDING OR OCCUPATION
- ★ 5TH AF BASE
- - - ESCORTED BOMBER RANGE
- - - BOMBER RANGE
- - - PHASE PERIMETERS
- - - BOUNDARY OF SWPA
- - - 5TH AF OPERATION OUTSIDE OF SWPA
- - - 400 AC 5TH
- ✕ 400 AC LOST
- ✕ 400 JAPANESE AC SHOT DOWN BY 5TH AF
- ✕ 400 JAPANESE AC DESTROYED ON GROUND BY 5TH AF
- ✕ 400 JAPANESE AC, JAPANESE NAVAL EFFICIENCY REDUCED TO 50%
- ✕ 100,000 TONS JAPANESE SHIPPING SUNK BY 5TH AF
- ✕ 100,000 JAPANESE TROOPS NEUTRALIZED IN CURRENT PHASE

5TH AIR FORCE FIRST PHASE OF OPERATIONS

ISOLATION OF RABAU

INITIATION OF 5TH AF OFFENSIVE TO EMIRAU LANDING
8 APRIL 1942 TO 21 MARCH 1944

EACH SQUARE = 400 AC

✕ > 661 (22 APRIL 1944)

1989 ON HAND (MARCH 1944)

JAPANESE AIR ORDER OF BATTLE
2656 AC, 31 MARCH 1942
4653 AC, 31 MARCH 1944

JAPANESE AF EFFICIENCY REDUCED TO 50% (21 MAR 44)
(348 AC WITHIN OPERATIONAL RANGE OF 5TH AF)

2978 DESTROYED (21 MARCH 1944)
(2203 SHOT DOWN → 775 DESTROYED ON GROUND)

EACH TRIANGLE = 100,000 TONS

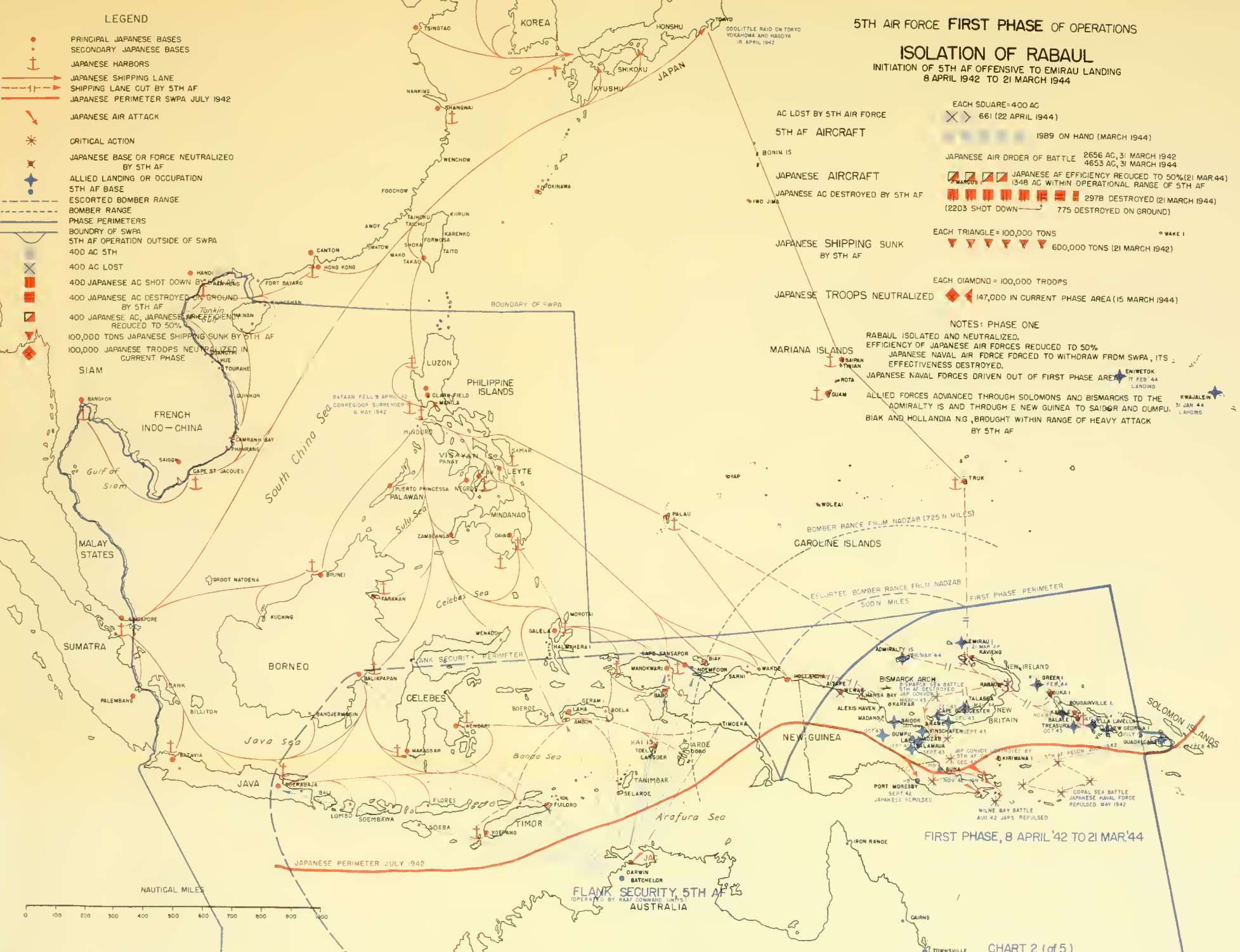
600,000 TONS (21 MARCH 1942)

EACH DIAMOND = 100,000 TROOPS

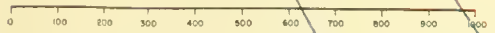
147,000 IN CURRENT PHASE AREA (15 MARCH 1944)

NOTES: PHASE ONE

RABAU ISOLATED AND NEUTRALIZED.
EFFICIENCY OF JAPANESE AIR FORCES REDUCED TO 50%
JAPANESE NAVAL AIR FORCE FORCED TO WITHDRAW FROM SWPA, ITS
EFFECTIVENESS DESTROYED.
JAPANESE NAVAL FORCES DRIVEN OUT OF FIRST PHASE AREA
ENIWETOK 17 FEB 44 LANDING
KWAJALEIN 31 JAN 44 LANDING
ALLIED FORCES ADVANCED THROUGH SOLOMONS AND BISMARKS TO THE
ADMIRALTY IS AND THROUGH E NEW GUINEA TO SAIDOR AND OUMPU.
BIAK AND HOLLANDIA NG BROUGHT WITHIN RANGE OF HEAVY ATTACK
BY 5TH AF



NAUTICAL MILES



FLANK SECURITY, 5TH AF
OPERATED BY NAVAL COMMAND SWPA
AUSTRALIA

FIRST PHASE, 8 APRIL '42 TO 21 MAR '44



5TH AIR FORCE SECOND PHASE OF OPERATIONS
 PREPARATION FOR ASSAULT ON PHILIPPINES
 HOLLANDIA TO EVE OF LEYTE - 21 MARCH 44 TO 20 OCTOBER 44

EACH SQUARE = 400 AG PREVIOUS DESTRUCTION

AG LOST BY 5TH AF X 229 (20 OCT 44) 661 X
 5TH AF AIRCRAFT 1565 ON HANO (OCT 44)

JAP AIRCRAFT JAP AF EFFICIENCY REDUCED TO 40% (31 OCT 44) JAP AIR ORDER OF BATTLE
 JAP AG DESTROYED BY 5TH AF 1181 2876
 (477 SHOT DOWN, 704 ON GROUND) (2703 PREV. SHOT DOWN, 179 ON GROUND)

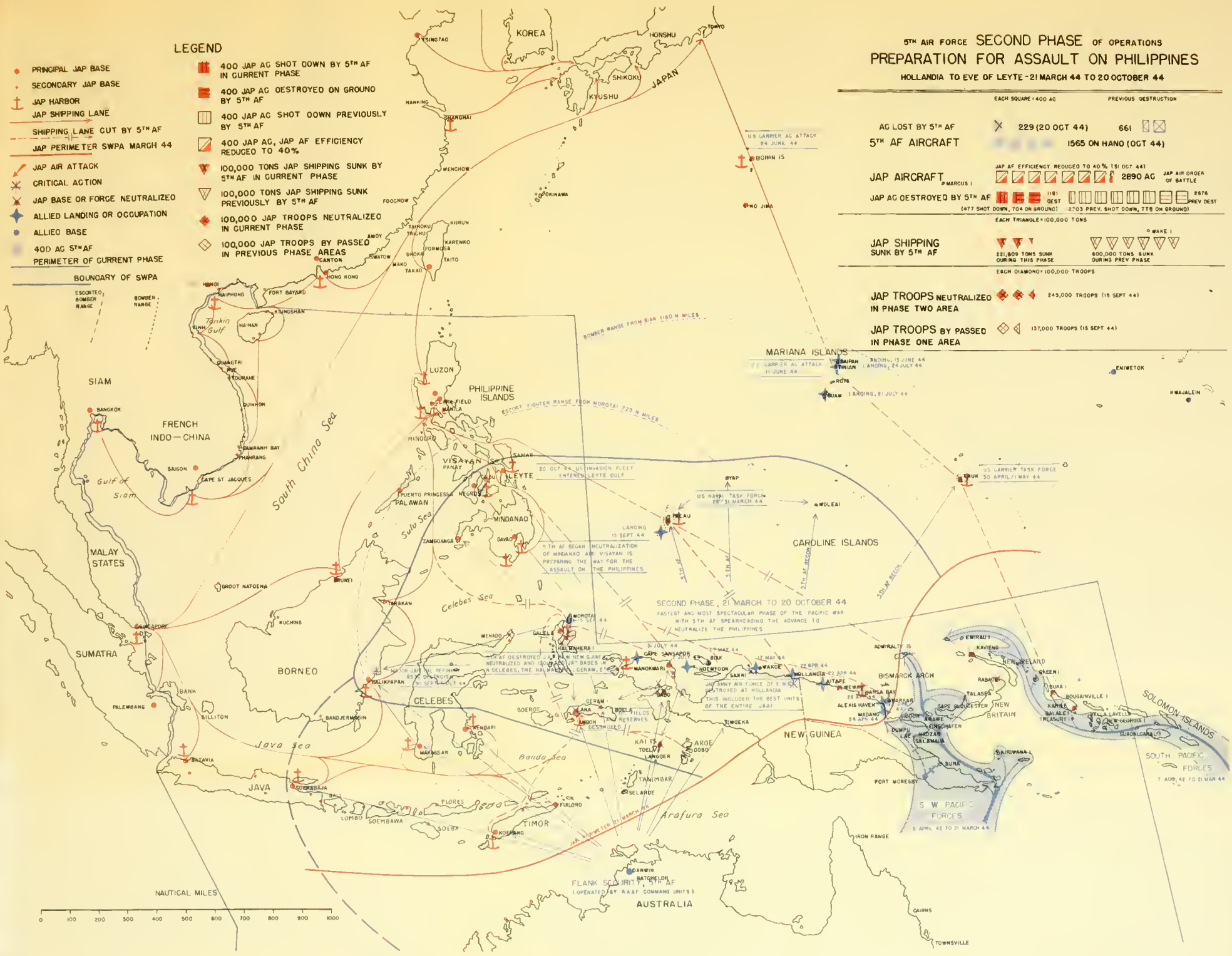
JAP SHIPPING SUNK BY 5TH AF 221,809 TONS SUNK DURING THIS PHASE 800,000 TONS SUNK DURING PREV PHASE
 EACH TRIANGLE = 100,000 TONS

JAP TROOPS NEUTRALIZED IN PHASE TWO AREA 243,000 TROOPS (15 SEPT 44)

JAP TROOPS BY PASSED IN PHASE ONE AREA 137,000 TROOPS (18 SEPT 44)

LEGEND

- PRINCIPAL JAP BASE
- SECONDARY JAP BASE
- ⚓ JAP HARBOR
- JAP SHIPPING LANE
- SHIPPING LANE CUT BY 5TH AF
- JAP PERIMETER SWPA MARCH 44
- ↗ JAP AIR ATTACK
- ✳ CRITICAL ACTION
- ★ JAP BASE OR FORCE NEUTRALIZED
- ✦ ALLIED LANDING OR OCCUPATION
- ALLIED BASE
- 400 AG 5TH AF PERIMETER OF CURRENT PHASE
- 400 JAP AG SHOT DOWN BY 5TH AF IN CURRENT PHASE
- 400 JAP AG DESTROYED ON GROUND BY 5TH AF
- ▨ 400 JAP AG SHOT DOWN PREVIOUSLY BY 5TH AF
- ▨ 400 JAP AG, JAP AF EFFICIENCY REDUCED TO 40%
- ▽ 100,000 TONS JAP SHIPPING SUNK BY 5TH AF IN CURRENT PHASE
- ▽ 100,000 TONS JAP SHIPPING SUNK PREVIOUSLY BY 5TH AF
- ◇ 100,000 JAP TROOPS NEUTRALIZED IN CURRENT PHASE
- ◇ 100,000 JAP TROOPS BY PASSED IN PREVIOUS PHASE AREAS



SECOND PHASE, 21 MARCH TO 20 OCTOBER 44
 FASTEST AND MOST SPECTACULAR PHASE OF THE PACIFIC WAR
 WITH 5TH AF SPEARHEADING THE ADVANCE TO
 NEUTRALIZE THE PHILIPPINES

5TH AF DESTROYED JAP NEW GUINEA NEUTRALIZED AND BOGAWAN JAP BASES IN
 CELEBES, THE MALAYAN, GERAW, ET AL.

JAP 5TH AIR FORCE OF NEW GUINEA DESTROYED AT HOLLANDIA
 THIS INCLUDED THE BEST UNITS OF THE ENTIRE JAAF

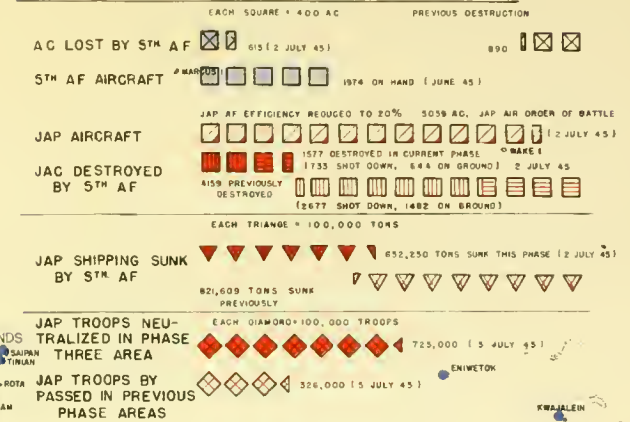
S W PACIFIC FORCES
 8 APRIL 42 TO 21 MARCH 44

FLANK SECURITY (OPERATED BY RAAF COMMAND UNITS)
 AUSTRALIA

LEGEND

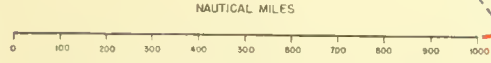
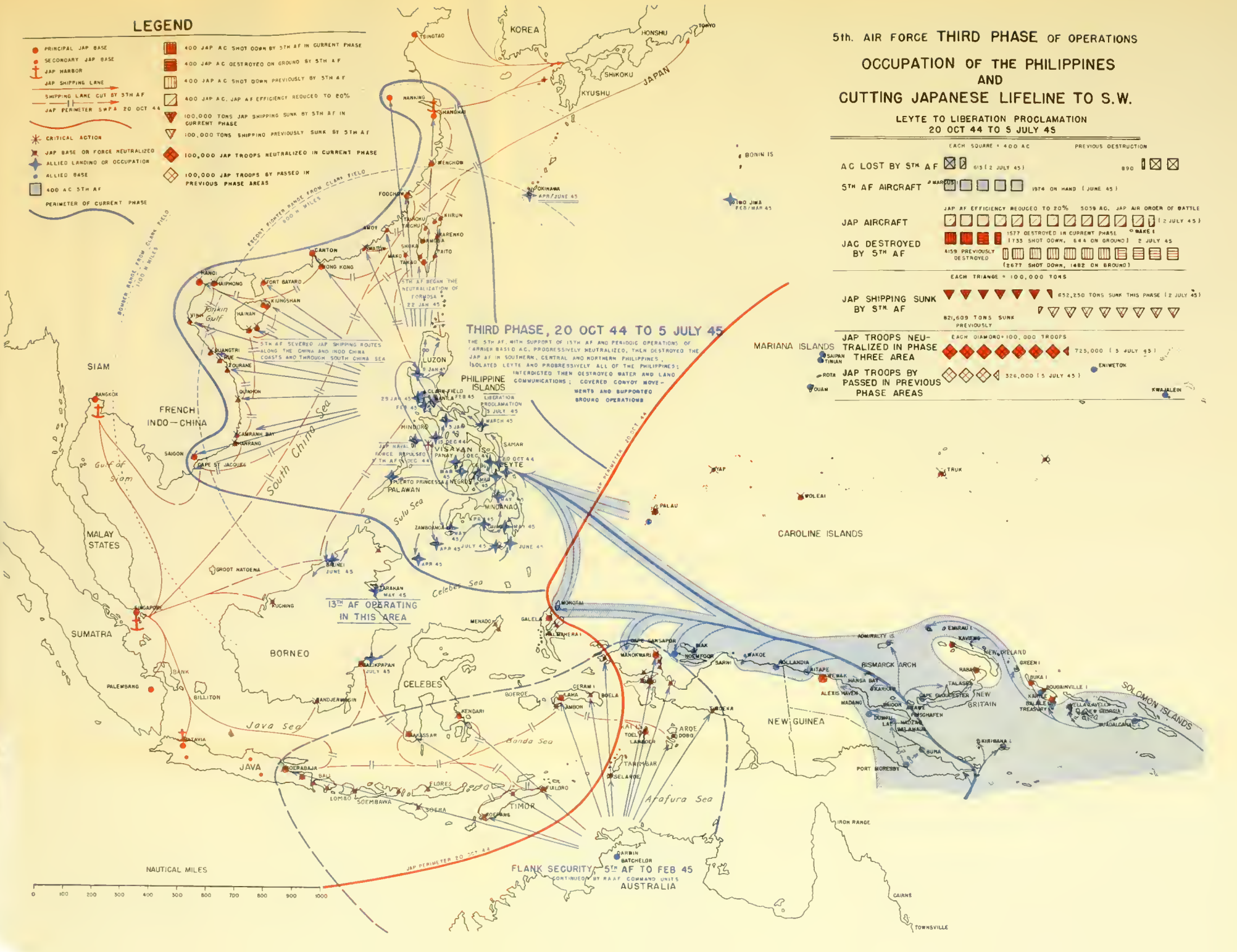
- PRINCIPAL JAP BASE
- SECONDARY JAP BASE
- ⚓ JAP HARBOR
- JAP SHIPPING LANE
- SHIPPING LANE CUT BY 5TH AF
- JAP PERIMETER SWPA 20 OCT 44
- ✳ CRITICAL ACTION
- ⚓ JAP BASE OR FORCE NEUTRALIZED
- ⚓ ALLIED LANDING OR OCCUPATION
- ⚓ ALLIED BASE
- ⚓ 400 AC 5TH AF
- ⚓ PERIMETER OF CURRENT PHASE
- ▣ 400 JAP AC SHOT DOWN BY 5TH AF IN CURRENT PHASE
- ▣ 400 JAP AC DESTROYED ON GROUND BY 5TH AF
- ▣ 400 JAP AC SHOT DOWN PREVIOUSLY BY 5TH AF
- ▣ 400 JAP AC, JAP AF EFFICIENCY REDUCED TO 20%
- ▣ 100,000 TONS JAP SHIPPING SUNK BY 5TH AF IN CURRENT PHASE
- ▣ 100,000 TONS SHIPPING PREVIOUSLY SUNK BY 5TH AF
- ◆ 100,000 JAP TROOPS NEUTRALIZED IN CURRENT PHASE
- ◆ 100,000 JAP TROOPS BY PASSED IN PREVIOUS PHASE AREAS

5th. AIR FORCE THIRD PHASE OF OPERATIONS OCCUPATION OF THE PHILIPPINES AND CUTTING JAPANESE LIFELINE TO S.W. LEYTE TO LIBERATION PROCLAMATION 20 OCT 44 TO 5 JULY 45



THIRD PHASE, 20 OCT 44 TO 5 JULY 45

THE 5TH AF, WITH SUPPORT OF 13TH AF AND PERIODIC OPERATIONS OF CARRIER BASED AC, PROGRESSIVELY NEUTRALIZED, THEN DESTROYED THE JAP AF IN SOUTHERN, CENTRAL AND NORTHERN PHILIPPINES. ISOLATED LEYTE AND PROGRESSIVELY ALL OF THE PHILIPPINES. INTERDICED THEM DESTROYED WATER AND LAND COMMUNICATIONS; COVERED CONVOY MOVEMENTS AND SUPPORTED GROUND OPERATIONS



FLANK SECURITY 5TH AF TO FEB 45
CONTINUED BY RAAF COMMAND UNITS AUSTRALIA

LEGEND

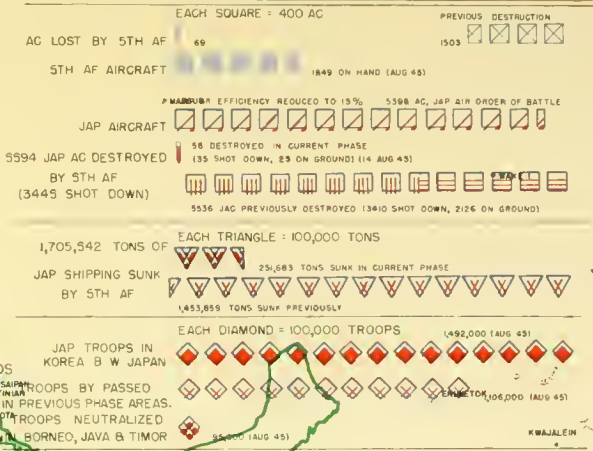
- PRINCIPAL JAP BASES
- SECONDARY JAP BASES
- + JAP HARBOR
- JAP SHIPPING LANE
- JAP SHIPPING LANE CUT BY 5TH AF
- JAP PERIMETER 2 JULY 45
- ✕ CRITICAL ACTION
- ◆ JAP BASE OR FORCE NEUTRALIZED
- ◆ ALLIED LANDING OR OCCUPATION
- ALLIED BASE
- 400 AC 5TH AF
- CURRENT PHASE PERIMETER
- 400 JAP AC SHOT DOWN BY 5TH AF IN CURRENT PHASE
- 400 JAP AC DESTROYED ON GROUND BY 5TH AF
- 400 JAP AC PREVIOUSLY SHOT DOWN BY 5TH AF
- ▽ JAP AF EFFICIENCY REDUCED TO 15% 400 AC
- ▽ 100,000 TONS OF JAP SHIPPING SUNK BY 5TH AF
- ▽ 100,000 TONS PREVIOUSLY SUNK BY 5TH AF
- ◆ 100,000 JAP TROOPS
- ◆ 100,000 TROOPS NEUTRALIZED
- ◆ 100,000 TROOPS BY PASSED

5TH AIR FORCE FOURTH PHASE OPERATIONS

PREPARATION FOR FINAL ASSAULT ON JAPAN

5TH AF ON OKINAWA TO SURRENDER OF JAPAN

2 JULY 45 TO 14 AUG 45



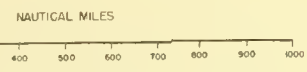
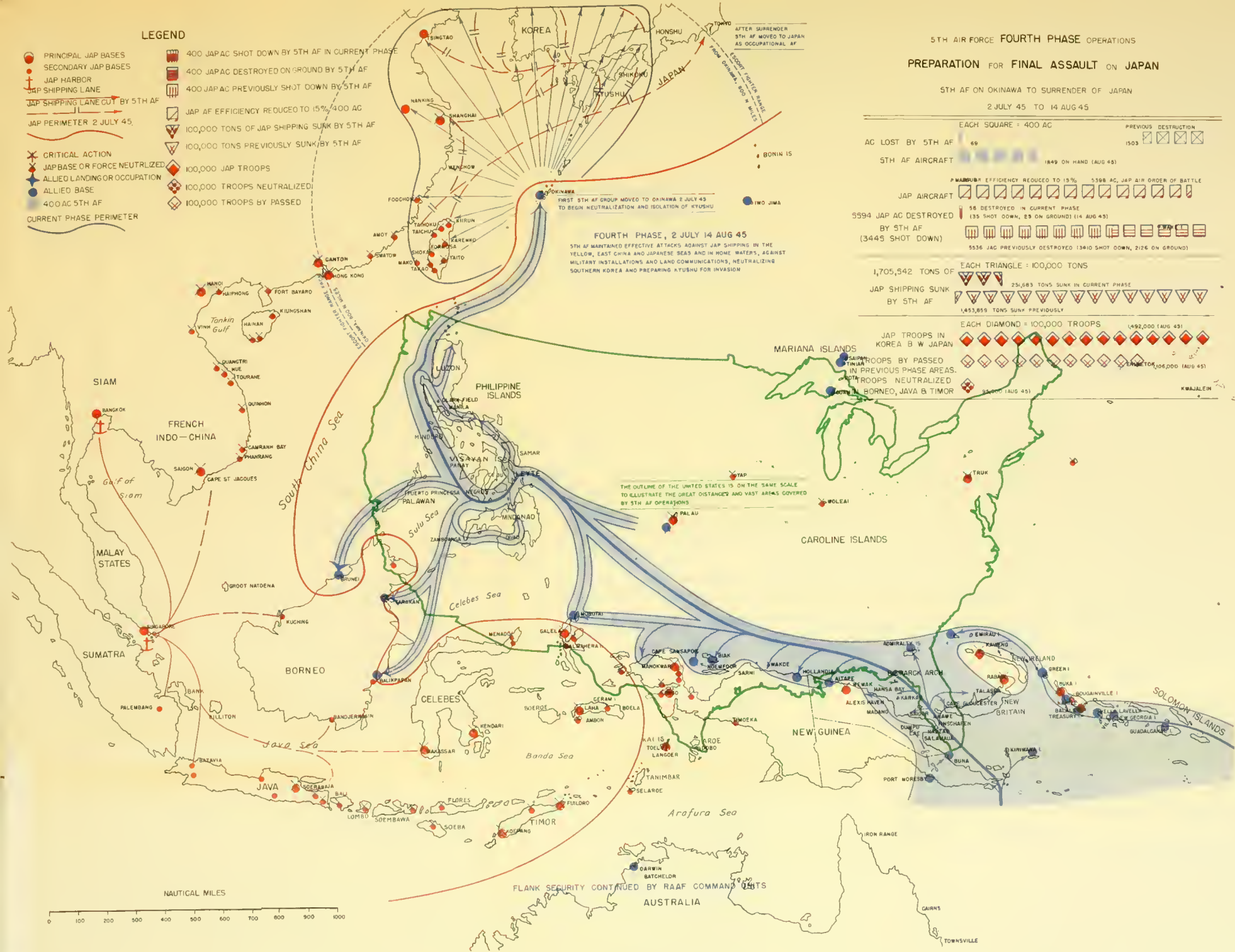
FOURTH PHASE, 2 JULY 14 AUG 45

5TH AF MAINTAINED EFFECTIVE ATTACKS AGAINST JAP SHIPPING IN THE YELLOW, EAST CHINA AND JAPANESE SEAS, AGAINST MILITARY INSTALLATIONS AND LAND COMMUNICATIONS, NEUTRALIZING SOUTHERN KOREA AND PREPARING KYUSHU FOR INVASION

FIRST 5TH AF GROUP MOVED TO OKINAWA 2 JULY 45 TO BEGIN NEUTRALIZATION AND ISOLATION OF KYUSHU

THE OUTLINE OF THE UNITED STATES IS ON THE SAME SCALE TO ILLUSTRATE THE GREAT DISTANCES AND VAST AREAS COVERED BY 5TH AF OPERATIONS

FLANK SECURITY CONTINUED BY RAAF COMMAND UNITS



PHASE I. ISOLATION OF RABAU

The Presidential Directive to the Supreme Commander Southwest Pacific Area, dated 30 March 1942, directed General MacArthur to:

1. Maintain our installations in the Philip-pines.
2. By destruction of enemy troop, combat, and supply ships, as well as aircraft and bases in Eastern Malaysia, New Guinea, Solomon Island and Bismarck regions, stem the Japanese advance toward Australia and disrupt its lines of communication.
3. Guard allied air, land, and sea communica-tions in and around SWPA.
4. Supervise the operation of shipping within SWPA.
5. Assist friendly forces in their activities in the Indian Theater and POA.
6. Maintain economic pressure on the home islands, by the destruction of their facilities for transporting resources from newly con- quered territories to Japan.
7. Hold areas of Australia most suited for establishment of bases to be used in future offensive action in order to check complete enemy conquest of SWPA.
8. Be ready to mount an allied offensive.

The 30 March 1942 directive was amended by radio directive from Cominch on 2 July 1942 in which CinC SWPA and Com SoPac were directed to carry out the following tasks with ultimate objective of the seizure and occupation of the New Britain, New Ireland, New Guinea area:

Task 1: Take and occupy, Lae, Salamaua, the NE New Guinea coast and remaining Solomon Islands.

Task 2: Take and occupy Rabaul, plus an ad- jacent location in the New Ireland or New Guinea areas.

Task 3: Seize and consolidate Tulagi and Santa Cruz Islands, with adjacent positions if necessary.

Tasks 1 and 2 of the 2 July radio directive were canceled by JCS 238/5/D 28 March 1943 at which time CinC SWPA was directed to:

Prepare to seize the Bismarck Archipelago. Maintain the initiative in order to contain and inflict losses on enemy forces as well as deny areas to the enemy.

To that end—

1. Airfields will be established on Woodlark and Kiriwina Islands.

2. Take and consolidate the Solomon Islands including southern Bougainville.

3. Take and consolidate Finchshaven, Sala- maua, Lae, Western New Britain and the Madang area.

A further directive from JCS dated 23 Janu- ary 1944 gave instructions to CinC SWPA to undertake the control or seizure of the Bis- marck Archipelago which mission was fore- warned in the previous directive. The landing in the Admiralties was made on 28 February 1944 at Los Negros.

Subsequently in JCS 713/4, dated 12 March 1944, the planned assault on Kavieng was can- celed and the neutralization of Rabaul-Kavieng by occupation of the Admiralties was directed. Mussau and Emirau Islands were to be occupied if required as air bases. The development of the Admiralties was to be expedited to assist in the neutralization of Truk and Palau.

General MacArthur's directives to the Fifth AF in the form of Operations Instruction pre- scribed the role of the air forces in carrying out the Theater's mission.

Stopping the Japanese Offensive

The mission of the Fifth AF, as prescribed in July 1942, by General MacArthur, was the support of SoPAC forces in the occupation of Southern Solomons by reconnaissance, the in- terdiction of enemy supply lines, and the neu- tralization of enemy air bases. The objective of all Allied forces at this time was to stop the Japanese advance and to gain time during which our own forces and bases could be built up in preparation for the offensive. The Fifth AF was the principal weapon at General Mac- Arthur's disposal to enable him to accomplish this objective while Allied Naval and Ground Forces were in formation.

The Japanese had landed at Buna on 22 July 1942, and at Milne Bay on 26 August. This plan of double envelopment of Port Moresby was intercepted and defeated by the repulse of the Japanese forces at Milne Bay. The Japanese thrust from Buna, however, advanced rapidly over the Owen Stanley Range toward Moresby.

U. S. Army engineers had been bending every effort to construct roads, docks, airdromes, and storage facilities in the Moresby area since

FIRST PHASE

5th AIR FORCE OPERATIONS



U.S. STRATEGIC BOMBING SURVEY
5TH AF REPORT
(SECTION II)
FIGURE 15

July 1942 to permit the concentration of all forces in New Guinea. Completed projects were still limited at this critical time. The air units available to meet the threat against Moresby were: two fighter groups and one squadron of the 3d Bomb Group (L), equipped with modified A-20s, all based at Moresby, and one heavy group and one medium bomber group staged in through Moresby from Australia. At Milne Bay two veteran RAAF P-40 squadrons were in position at the time of the Japanese assault.

The severing of the enemy supply lines over the Owen Stanley Range was accomplished by utilizing the strafing and dive bombing capabilities of the fighters. In addition the recently modified A-20, using its 8 forward machine guns, and dropping a dispersed group of 23 lb fragmentation bomb along the jungle trails, quickly established itself as a killer in jungle warfare. The Japanese, closely pressed by Australian ground forces, dropped back over the torturous jungle trails to Buna.

During the Australian pursuit of the Japanese over the Owen Stanleys the troop carrier aircraft in the Southwest Pacific first came into its own. Air supply proved the only practicable method of meeting the demands of troops advancing through jungle trails. Thousands of pounds of food, ammunition, clothing and shoes were dropped daily by free drop. Weather and terrain made the dropping incalculable at best, and in some areas a drop recovery of only 20-30 percent of supplies could be expected. Simultaneously our ground effort against Buna was intensified by flying the greater portion of the United States 32d Inf. Div. into the Buna area. Due to the lack of amphibious lift in the SWPA, and the inability of the Navy to enter the uncharted and confined waters north of New Guinea, the supply mission for the ground forces in the Buna area continued to fall to the troop carrier aircraft, supplemented by combat aircraft at critical periods. The air lift available was insufficient to meet more than current supply commitments so that any curtailment of supply missions, because of weather or diversion of missions, left the ground forces in a precarious logistic position. The advantage of landing supplies, and unloading them directly in dumps, was recognized, and "air heads," rough jungle air strips, were established wher-

ever the minimum safety requirements for a strip could be met. The troop carrier aircraft were utilized on return trips from "air heads" to Port Moresby and Townsville to evacuate sick and wounded personnel. An average of 100 patients daily was evacuated during this phase of the campaign. The benefit of this quick air evacuation from the battlefield was so great that for the remainder of the war a substantial portion of the air effort was devoted to that service.

The combat air support of the Buna operation had two principal missions: First, to maintain the isolation of the battlefield, already secured by geography, and second, to furnish maximum close support to the ground forces. The small numerical strength of the Fifth AF at this time dictated tactics that called for using all types of aviation, in concentrated form on a priority basis, to meet constant requirements demanding more aircraft than were ever available. The only means of enemy reinforcement of Buna was by seaborne movement. Enemy shipping was thus first priority while ground support was second. Normally a striking force of aircraft was held on ground alert until reconnaissance reported that no shipping targets bearing possible enemy reinforcement were in range. If such shipping was discovered it was immediately attacked, otherwise the striking force was released for ground support. Special missions utilizing all available aircraft were normally set up days in advance to support an all out ground effort. Only the threat of waterborne reinforcements was allowed to interfere with this type of planned support.

In this campaign the importance of aerial reconnaissance became fully appreciated. Long range reconnaissance revealed enemy concentrations, and new bases in sufficient time to permit adequate preparation to meet new thrusts. Reconnaissance photography provided artillery and ground reconnaissance maps and briefing photos for air crews, while the verbal reports of aerial observers on enemy troop movements and concentrations were invaluable to the ground commanders who lacked suitable military maps.

The capture of Buna was a result of the teamwork of ground and air forces. It gave territory on the North Coast of New Guinea on which to build new bases and permitted the

Fifth AF to eliminate the Owen Stanley Range, and hence to extend the range of aircraft well beyond the mere airline distance between Moresby and Buna, due to better weather and smaller gas reserve requirements. The offensive of the Japanese in New Guinea had now been stopped. Bases at Milne Bay, Oro Bay, and Port Moresby were at last secure to set the stage for the initiation of the real offensive in SWPA.

Allied Offensive for the Isolation of Rabaul

The broad scheme of maneuver, as contained in directives to General MacArthur, was to knock out Rabaul and prepare for further advances towards the Philippines. The South and Southwest Pacific forces were linked in a double-barreled offensive. The South Pacific forces, on the eastern flank of the advance, were to follow the Solomon Islands chain towards Rabaul, at the same time the Southwest Pacific forces were to move up the northeast coast of New Guinea and into western New Britain. Subsequent directives extended the eastern flank advance to Mussau and Emirau Islands, and the western arm was advanced to include the Admiralties.

Aviation engineers followed the ground troops in the Dobodura plains to construct the series of airdromes from which the effective range of Fifth AF B-25 strafers was extended over Rabaul and Wewak. Maximum effort was placed in the Dobodura airdrome construction so that in the spring of 1943 combat elements of the Fifth AF began concentrating under the First Air Task Force. The primary mission of the Air Force now became the neutralization of Rabaul, which since the summer of 1942, had been a primary target for Fifth AF heavy and medium bombers. Previously, the neutralization of Vunakanau and Lakunai airdromes at Rabaul by Fifth AF units in support of the Guadalcanal landing had drawn a "Well Done" from Admiral Ghormley.

The movement of the Southwest Pacific Forces on the western axis of attack was launched on 22 and 23 June 1943 when amphibious forces seized Kiriwina and Woodlark Islands.

Further preparations for the advance up the North Coast of New Guinea were progressing. Wau, in central New Guinea southwest of Salamaua, had been saved from a sudden thrust by

Japanese forces in early 1943 when Australian reinforcements were rushed in by air transport. These same Australian ground forces then pushed the Japanese back to Salamaua in one of the most closely knit air supported operations conducted in the SWPA. Next another inland airdrome requiring complete air support was built at Marilinan in the interior of British New Guinea. This airdrome was the key factor in the later annihilation of the Japanese air units in Wewak where more than 200 enemy aircraft were destroyed on airdromes by coordinated air attacks, both low and high level, on 17 and 18 August 1943. With the immediate enemy air threat from Wewak eliminated and air cover for amphibious forces assured by the Marilinan base, the next movement forward against Lae was now feasible.

The attack against Lae, following a long period of harassing and neutralizing air raids, was carried out as a pincers movement, one jaw amphibious and the other airborne. The amphibious assault north of Lae was accomplished on 4 September 1943. The airborne assault on 5 September of the United States 501st Parachute Infantry Regiment at Nadzab has become a model in airborne tactics.

Preliminary heavy bombardment of the Lae area had eliminated all known prepared enemy defenses. Preceding the paratroopers successive waves of fighters, bombers and attack bombers raked the drop area with machine gun fire and fragmentation bombs, eliminating all possible enemy resistance. Attack bombers screened the drop area with smoke to prevent any enemy fire from the flanks. No enemy resistance was left to meet our paratroops who quickly consolidated their positions, assisted the engineers in building rough landing strips and advanced upon Lae village. Following the seizure of Lae against negligible resistance, amphibious forces, intended to reinforce the attack on Lae, were diverted to seize Finschafen—the next scheduled objective on the North Coast of New Guinea. Following the capture of Finschafen and Lae, air and service bases were quickly built at Nadzab (as a center) with the whole lower Markham Valley progressively developed into a major air base. Simultaneously with the capture of Finschafen, the Australian Seventh Division—supported entirely by aircraft of the Fifth AF for troop move-

ments, food, ammunition and close support—followed the retreating Japanese up the Ramu River Valley as far as Bogadjim, while other Allied ground troops pushed the Japanese up the North New Guinea Coast from Finschafen. Airborne effort was utilized in the Ramu Valley to construct a major air base at Gusap from which two fighter groups and a light bomb group could be operated. These were supplied entirely by air to support further movement up the North Coast of New Guinea.

The role of the Fifth AF in the intertheater effort to neutralize Rabaul now lent itself primarily to the support of the South Pacific Force in their advance up the Solomons to Bougainville. The new base at Dobodura was the concentration point for the entire Fifth AF in a series of attacks during the period 12 October through 7 November 1943 against enemy airdromes, aircraft, and shipping concentrations at Rabaul. This all-out effort against Rabaul was continued by SWPA and Sopac Air Forces and insured that the Japanese were never again able to use it as a threat to the Allied advance. The Fifth AF turned its attention westward.

The movement of the Southwest Pacific Forces continued into New Britain, where successive landings were made at Arawe, and Cape Gloucester in late December 1943. The Gloucester landing was unique because of the extensive concentrated air bombardment preparation for the landing. Three thousand five hundred tons of bombs were dropped within 37 days prior to the landing, leaving the 3,500 Japanese defenders dazed and disorganized so that ground troops walked ashore from their landing barges unopposed. A further amphibious move was made up the New Guinea Coast where Saidor was captured on 2 January, providing a valuable new airdrome on the North New Guinea Coast. Little time was lost by the Southwest Pacific Forces in advancing again. Air reconnaissance of the Admiralty Islands indicated that the enemy defenses there were not strong. A ground reconnaissance in force on 29 February was successfully developed into a full scale operation. The seizure of the Admiralties completed the isolation of Rabaul.

Flank Support from Darwin

The Allied base at Darwin, Australia, guarded the western flank of General Mac-

Arthur's advance. The air operations at this base, conducted by the RAAF Command, were of sufficient strength to require a sizeable enemy force to oppose them. Its assistance to the main New Guinea action was invaluable.

The 49th Fighter Group operated from Darwin throughout the spring and summer of 1942, and built up a superb combat record against the Japanese. The operation of this unit early discouraged the mass enemy attacks against Darwin and permitted the rebuilding of our bases there with minimum interference. The receipt of additional RAAF units permitted this group to shift to New Guinea.

Medium bombers were temporarily staged into Darwin for operations against the islands in the Arafura Sea during this period. Upon its arrival in May 1943 the 380th Bomb Group was detached to the Darwin Area to carry on long distance raids against the Japanese. The heavy bombers, in conjunction with the RAAF, concentrated on harassing the enemy supply lines, and air bases in the Arafura Sea, the valuable Avgas refinery at Balikpapan, the critical nickle mines at Pomelan in the Celebes, and the NEI shipping centers within range.

The results of this constant flank effort were great. The Japanese maintained fighters at Balikpapan and in the Celebes to guard the valuable gas and nickel sources. Ever sensitive to any threat against the NEI, they reached to the staging of medium bombers into Darwin by reinforcing Timor to a full division strength. In their efforts to keep their forward forces supplied, constant losses in shipping, men and material were inflicted against the Japanese.

Gains from Rabaul's Isolation

The isolation of Rabaul marked the end of the first phase of the war against Japan. In addition to eliminating Rabaul as a base the following results were obtained:

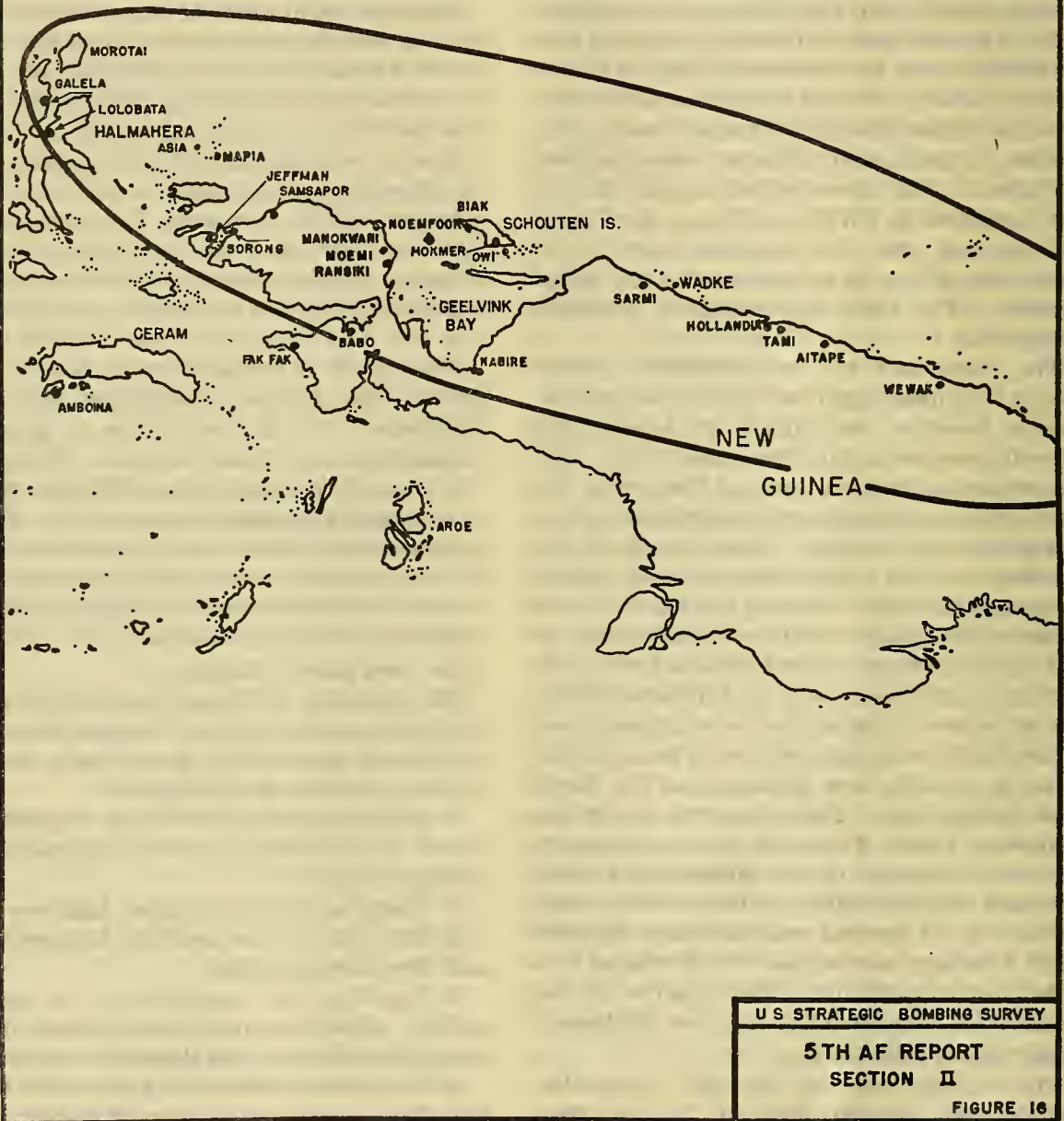
1. Japanese Naval Air Force crippled, and forced to withdraw toward the homeland for reorganization.

2. Heavy attrition forced on Japanese Army and Navy Air Forces and the Japanese Navy and Merchant shipping.

3. Isolation and neutralization of approximately 147,000 enemy ground troops in Solomons, New Guinea, and Bismarck Archipelago.

4. Provision of new bases from which to support the advance toward the Philippines.

SECOND PHASE FIFTH AIR FORCE OPERATIONS



PHASE II. PREPARATION FOR THE ASSAULT ON THE PHILIPPINES

1 March 1944 to 15 September 1944

With the establishment of forces on Manus, Emirau, and Green Islands, the encirclement of Rabaul was complete; its isolation could be insured by small forces operating against ever diminishing targets and keeping constant surveillance over the sea lanes along which relief of reinforcement might travel. The next campaign was opened immediately—the campaign to establish those bases from which the assault on the Philippines could be launched.

The theater mission for this campaign stated in JCS 713/4, 12 March 1944 was:

a. Occupy Hollandia.

b. Then carry out, with whatever forces are available, such other activities along the New Guinea coast and elsewhere which would give the greatest support to future operations against Palau and Mindanao.

c. Prepare bases in the Admiralties as soon as possible in order that SWPA air forces may join in the neutralization actions against Palau and Truk.

In the Theater Commander's outline plan (Reno III, 20 October 1943) for accomplishing the mission to seize Mindanao by airborne-waterborne operation, the scheme of maneuver was: by occupying minimum bases, advance westward through New Guinea and into the Philippines as soon as possible; in order that land-based bombers may be used as effectively as possible.

Specifically, in successive operations, the Allied Air Forces were directed to:

a. Provide fighter cover for convoys and naval task forces.

b. Destroy ground defenses prior to D-Day.

c. Neutralize hostile air operations within range.

d. Destroy hostile shipping and port installations within range and deny hostile reinforcement of the objective area.

e. Provide close air support of ground forces.

f. Continue strikes on Truk and Woleai.

g. Continue neutralization of Palau Group.

h. Provide aerial reconnaissance as required.

i. Establish air forces in the objective area as directed.

The decision to occupy minimum bases meant,

in addition, to operate on minimum logistics. Ship-tons delivered over the beach were as important as bomb-tons on the target. The effect of this aim was noticed in the necessity to compose base garrisons from those units most economically transported forward; in splitting units into echelons of movement, some of which were never reunited until June, 1945; in reducing vehicle strength of organizations by 25 to 50 percent; in transporting material instead of personnel so that relief and replacement fillers were left behind; and other means of reducing the overhead of combat operations. This economy proved a severe strain on the ability to maintain 24 hour air operations but the fact that it was done and the operations were carried out provided a new concept of the speed with which land-based air could advance.

To advance the bomber line as planned required the combined effort of all forces. The air force missions were:

a. Destroy the enemy air forces within radius of action of our airplanes.

b. Prepare beaches for landing by destroying enemy ground defenses prior to D-Day.

c. Protect naval forces en route to objective areas.

d. Establish air forces in objective areas to protect and support the forces in the area, establish reconnaissance and effective blockade over sea areas within range, destroy enemy war resources and, in preparation for further operations, again destroy enemy air power within range.

This pattern, applied by the Fifth AF to the second major campaign, was accomplished in the following successive steps:

a. Hollandia was attacked and the enemy air force there was destroyed in a series of Fifth AF attacks from 30 March to 6 April 1944. This total destruction of the enemy air force supported the carrier task force in its attack on Palau and in its mission of interdicting enemy air forces west of Hollandia during the landing operations there. The Carrier Task Force's report of this operation supporting Hollandia stated that so much damage had been accomplished against installations at Hollandia by prior Fifth AF attacks that enemy defense was negligible and that any claims against the enemy were difficult to establish.

b. Air cover was provided for the Seventh Fleet forces advancing to Hollandia and Aitape.

c. Air Forces were established at Aitape, Hollandia and Wakde.

d. Defense and support mechanism was put into operation.

e. Heavy attacks on Palau were conducted from Manus, Hollandia and Wakde.

f. Enemy air forces in the Biak-Noemfoor-Geelvink Bay area were destroyed.

g. Beach defenses were knocked out prior to landing at Biak and Noemfoor.

h. Air cover was provided for naval forces advancing to Biak-Noemfoor.

i. Enemy sea-borne reinforcements for Biak were turned back in an air action west of Biak, 8 June 1944.

j. Air forces were established at Biak, Noemfoor, and Sansapor.

k. Attacks were launched against Celebes bases, Davao, and Ceram.

l. Air forces were established on Morotai.

During this period the Fifth AF progressed from a force of 378 planes deployed on the Darwin-Nadzab-Manus line to a force of 1,100 planes on the Darwin-Biak-Morotai line. Improvement in equipment gave greater range and greater striking power, heavily defended targets were brought under attack and escorting fighters now accompanied bombers on longer range missions. Troop carrier planes, augmented by combat types, were employed to carry tremendous quantities of food, supplies, and ammunition to forces whose seaborne supplies were not adequate. Air-sea-rescue facilities and techniques were developed to give airmen a greater sense of security and chance for survival.

During this phase of operations in which the Fifth AF spearheaded the theater attack, SWPA forces moved rapidly from Lae to Morotai. Each successive move was made as rapidly as a task force could be equipped, the attack rehearsed, amphibious shipping assembled and launched. The primary objective of each movement forward was to secure a new beachhead area on which airdromes could be installed from which further advances could be supported. The assault beachhead was carefully surveyed from preinvasion photos, airdrome areas selected and airdrome engineers following closely on the heels of the assault troops with the

objective of having a strip prepared for the operation of our aircraft within a minimum of 5 days of the assault landing. The limitation to the speed of forward movement was not entirely the installation of Air Forces but was governed by the speed with which ground troops could be assembled, trained and more important still, by the availability of amphibious lift, always a critical item.

While the Fifth AF was growing in power and experience, constant pressure maintained against the Japanese Air Force from all sides continued the depletion of his combat effectiveness. In actual numbers of airplanes the Japanese Air Force had grown perceptibly, but the number, experience, and ability of the pilots and crews declined. The efficient organization which had been able, during 1942 and 1943, to shift forces quickly and fight effectively was gone. The heavy losses at Midway, Rabaul, Wewak and Hollandia had so weakened and disorganized the Japanese Air Forces that effective operations on a large scale were no longer possible. Japanese losses were cumulative as valuable maintenance units and equipment were lost with each successive operation and forward movement of our forces.

Losses in larger and faster ships, and the necessity of maintaining such vessels on the main routes of supply to Empire, caused the Japanese to resort to smaller shipping for inter-theater troop movements and supply. The "Sea Truck," a small wooden ship of stylized construction (100/300 tons), became a most important factor in his surface movement from early 1943. The power barge was also made and used in large numbers. These vessels were manufactured at Soerbaja, Davao, and other places beyond our range of attack. They were used on long sea hauls at times, movement being traced from Philippines to Halmaheras and New Guinea in such vessels. They were used almost entirely in redistribution from supply termini in the combat zones. Fishing vessels, luggers, and prahus were also extensively used in intertheater supply and were capable of moving effective tonnage by their numbers and the ability to hide in small inlets. This small shipping became an increasingly important target for Fifth AF and regular hunts were made for it until its movement ceased.

THIRD PHASE

5th AIR FORCE OPERATIONS



The over-all results of this campaign, measured in terms of accomplishment were these:

a. The directive from the JCS to the theater commander was accomplished; the Thirteenth AF attacks on Truk and Woleai were continued until these bases were no longer a threat to our forces; Hollandia was occupied isolating a large Japanese garrison in New Guinea and providing a major base for support of the Leyte operation; Biak, Noemfoor, Sansapor and Morotai were occupied and major air elements based there to provide flank protection for our forces advance to the Philippines, cover for seaborne moves and bases for offensive operations.

b. Five hundred eighty-four enemy aircraft were destroyed according to combat claims made by the Fifth AF.

c. The air blockade isolated New Guinea and the Halmaheras and denied the Japanese the power of supply, reinforcement and evacuation in those areas.

d. The bomber line could now be extended to Balikpapan and the Visayas.

e. All Japanese bases in New Guinea and the Celebes were rendered ineffective.

PHASE III. OCCUPATION OF THE PHILIPPINES

Preinvasion

From the capture of Morotai to the assault on Leyte the Air Forces mission was to: (a) continue attacks on the enemy air forces within range, (b) support the ground forces, (c) protect areas occupied and (d) such other missions as would prepare the way for the invasion.

With the establishment of the Fifth AF on Biak, Sansapor, and Morotai the enemy abandoned their air bases in the Celebes and Halmaheras. Heavy attacks were concentrated on enemy air forces and shipping in the Ceram area; Laha and Haroekoe, Witicola and Amboina were attacked in strength; Menado, Belaagoeki and Samoerang came under heavy attacks by medium and heavy bombers. Daily fighter sweeps on offensive and reconnaissance missions kept all these dead areas under surveillance. An effective method of inducing attrition in these forces was to keep them on the move within a limited area, thereby further weakening their hopeless supply and food problem.

To assist in the over-all reduction of the Jap

fighting strength and to reduce immediately the reserve and potential supply of fuel for the enemy fighting machine, a series of attacks were launched against Balikpapan in late September and early October. The destruction of vital oil refining and storage facilities here immediately decreased the enemy's ability to wage war. In these attacks heavy bombers, taking off from bases over 1,100 nautical miles from the target with a gross load of over 69,000 pounds rendezvoused at the target with fighters taking off from other bases more than 700 nautical miles from the target. In addition to the damage to the oil industry at Balikpapan, the combined power of the bombers and fighters accounted for the destruction of 96 enemy airplanes during these attacks.

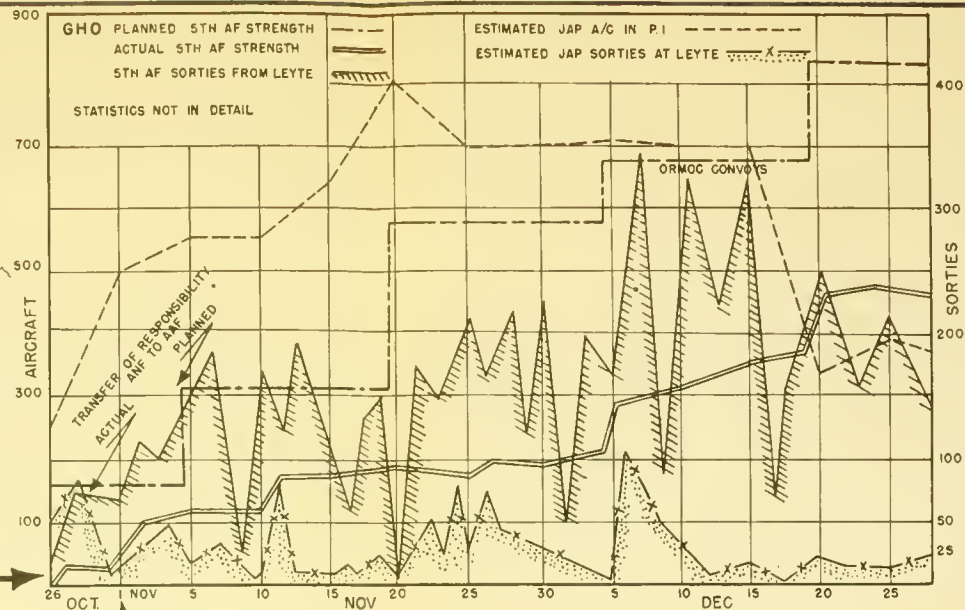
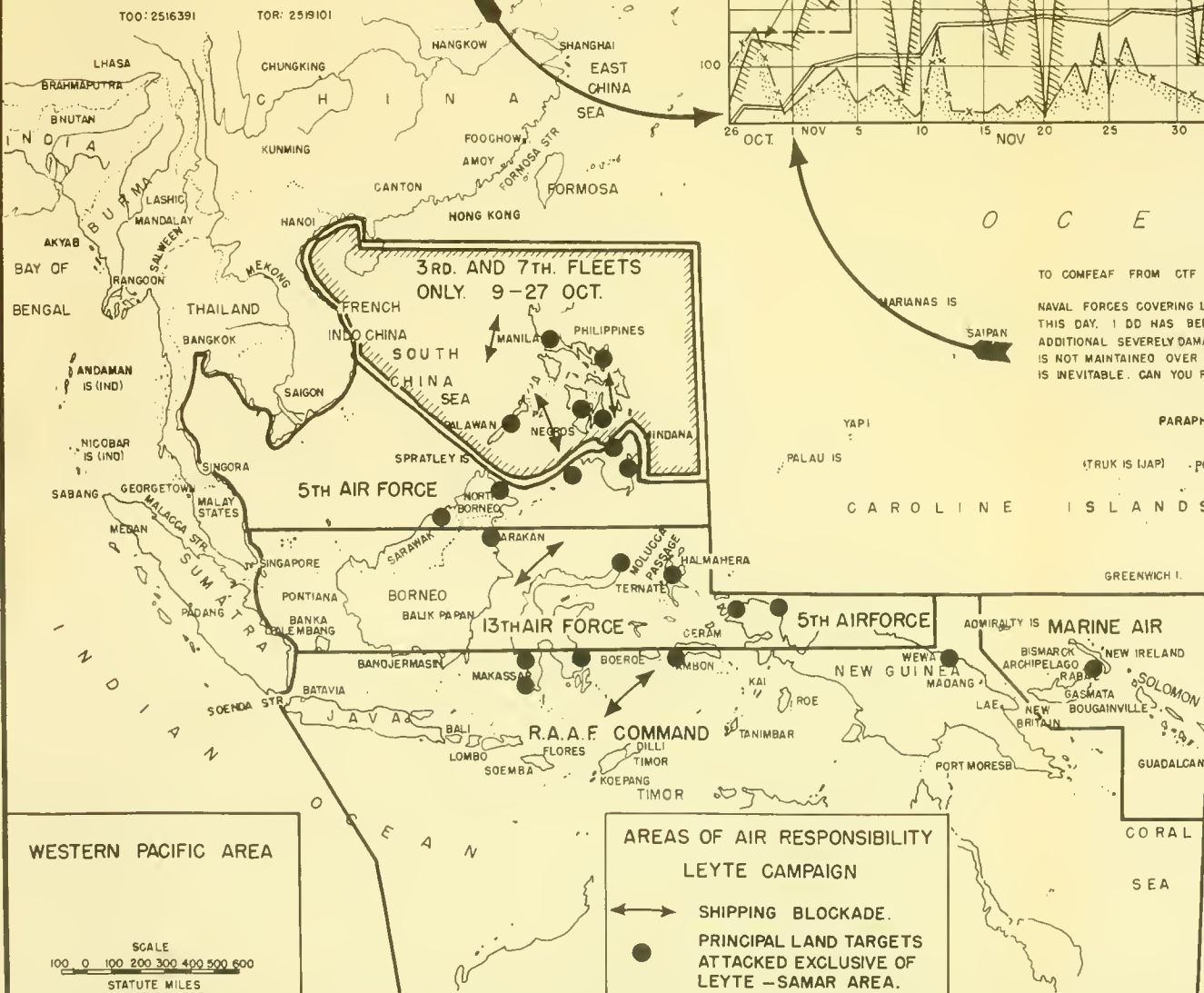
The capture of Morotai and Palau provided the springboards for the assault on the Philippines and permitted the neutralization of bases and air forces in the Southern Philippine Islands. Although it was originally planned to seize bases at Talaud and Sarangani Bay for the installation of air forces covering the advance to Central and Northern Philippines, intelligence reports from the Third Fleet, then attacking the Philippines, brought about a rapid rearrangement of plans. The first report, dated 13 September, indicated that landing there could be made without any intermediate operations, covered by fleet air. The enemy air forces were reported by Commander Third Fleet to be a "hollow shell, operating on a shoe string." Taking advantage of this reported weakness in the Japanese defenses the invasion of the Philippines, which in JCS 713/9 had been directed for 20 December, 1944, was moved up to 20 October 1944 by the JCS on 15 September 1944.

The Leyte operation was agreed upon under the assumption that Jap air strength in the Philippines was weak and naval forces would not retaliate. The invasion was accomplished 60 days early by diverting the ground forces set up for the Yap, Talaud, and Sarangani Bay operations. The decision called for abandoning the standard pattern of movement so successfully used in the Southwest Pacific Area: that no offensive movement would be made beyond the effective supporting range of land-based air. Only once before had this pattern been broken, and then by going into Hollandia where

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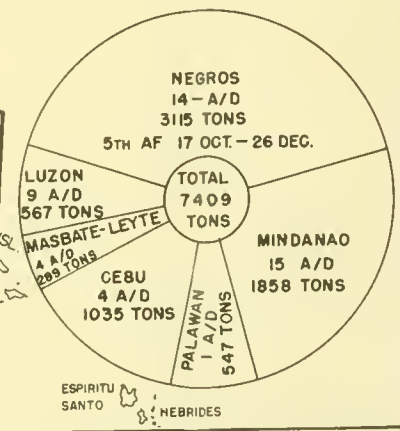
FROM CTF 77 TO CINC BWPA INFO COMFEAF — 26 OCT. 44

CAN FILTERS BE FLOWN IN TOMORROW? APPARENTLY THE ENEMY HAS FLOWN A LARGE NUMBER OF AIRCRAFT INTO THE PHILIPPINES, IN ADDITION STRONG JAPANESE SURFACE UNITS GOT THROUGH SAN BERNARDINO STRAIT LAST NITE. OUR CVES HAVE BEEN GRIPPLED SEVERELY BY REPEATED AIR AND SURFACE ATTACKS TODAY. PROBABLY LESS THAN HALF THE GROUP CAN FUNCTION AT ALL. THE MAXIMUM CVE AIR EFFORT HAS BEEN EXTENDED IN SELF DEFENSE WITH SUBSEQUENT INABILITY TO PROVIDE FILTER COVER FOR LEYTE. IN LEYTE GULF THIS AFTERNOON WILL BE ONE GRIPPLED CVE DIVISION WITH OTHERS FOLLOWING TOMORROW. TASK GROUPS 38.1 AND 38.2 WILL BE HERE TOMORROW MORNING AND WILL BE ABLE TO FURNISH FILTER COVER BUT THOSE GROUPS SHOULD BE HITTING ENEMY SURFACE VESSELS IN THE AREA AS WELL AS ATTACKING ENEMY AIRCRAFT IN THE AIR AND ON THE GROUND. IT IS OF THE UTMOST IMPORTANCE THAT LAND BASED FILTERS BE ESTABLISHED IN LEYTE IMMEDIATELY.



TO COMFEAF FROM CTF 77, 1 NOV. 44

NAVAL FORCES COVERING LEYTE REPORT 2 HEAVY AIR ATTACKS THIS DAY. 1 DD HAS BEEN SUNK BY TORPEDO PLANE AND 3 ADDITIONAL SEVERELY DAMAGED. IF ADEQUATE FIGHTER COVER IS NOT MAINTAINED OVER COMBATANT SHIPS THEIR DESTRUCTION IS INEVITABLE. CAN YOU PROVIDE NECESSARY PROTECTION?



the enemy air forces had been destroyed by the Fifth AF. Engineer plans for early construction of airdromes on Leyte were predicated on the decision to rely on carrier based air until 4 November.

The mission of the Third Fleet was to neutralize the hostile air forces in Okinawa, Formosa, Northern Luzon, Bicol, and Visayan areas prior to A-Day and support landing operations in coordination with the Seventh Fleet. The mission of the Seventh Fleet was to provide air protection for convoys and naval task forces and to provide direct support of landing operations until relieved by land-based air. The Fifth AF was charged with destroying hostile air forces in the Celebes Sea area, protecting the Western flank of the operations until relieved by the Thirteenth AF, neutralizing hostile air forces in Mindanao south of 8°45' N, and protecting convoys and naval forces within range of land-based air.

The trials of our Third and Seventh Fleets following the initial landings of our forces in outer Leyte Gulf, 17 October, are carried in detail in other reports. The increasing tempo of enemy air action beginning 20 October were a prelude to the concentration of opposing naval forces for the Battle of Leyte Gulf, 24-26 October. With the withdrawal of naval forces the Jap counter air attacks continued in order to cover the entry of Jap infantry into the "back door" of ORMOC, which is further described in Section VI, paragraph 17b, of this report. As a result of the enemy air and surface attacks in the battle for Leyte Gulf the Seventh Fleet Air combat effectiveness was destroyed and the CVE's had to be withdrawn. The Third Fleet in maneuvering to meet the various enemy task groups during the period 24-26 October expended its potential to the extent that it was forced to withdraw to Ulithi to refuel by 30 October. As a result of the exhaustion of Third and Seventh Fleet Air in the Leyte Gulf action, and on the request of the naval commanders; General MacArthur directed the Allied Air Forces (Fifth AF) to assume the responsibility for all air operations in the Philippine Islands on 27 October. The original date for the Fifth AF assumption of the air mission was 4 November and this advancement of transfer date prevented airdrome construction to provide even minimum operational standards. The

first reenforced squadron of P-38s arrived at Tacloban at noon 27 October and the Fifth AF assumed the Philippine air responsibility at 1600 of the same day.

During the preinvasion period the Fifth AF had: completed the neutralization of enemy forces in the Celebes and Halmaheras, reduced the great Balikpapan oil installations, closed the Makassar Straits to all except minor shipping, and supported the initial Leyte operations by the neutralization of the enemy forces in Mindanao.

Leyte

The next phase of the Fifth AF campaign to occupy the Philippines deals principally with the securing of the forces in Leyte Gulf area and the support of the ground forces at ORMOC. Lack of airdrome sites, shortage of engineer units and heavy rains prevented the movement of Air Force units into Leyte as planned and air operations were improvised to meet this unforeseen condition. Since airdromes would not support the bomber operations as originally planned, fighters were to carry out their functions. In addition to the task of furnishing air protection for the ground and naval forces in the Leyte area, fighters of the Fifth AF were called upon repeatedly to engage shipborne reinforcements being pushed recklessly into the Visayas by the enemy. During the course of the operations to secure Leyte the Fifth AF accounted for the sinking of an estimated 40,000-70,000 troops of which an unknown number got ashore without equipment at other islands than Leyte. In the defense of Leyte Gulf area the Fifth AF accounted for the destruction of 117 enemy airplanes in the air during the period 27 October to 3 November 1944. Conditions at Leyte were still hazardous and the Japanese effort continued on an increasing scale until 6 December on which day there were more than 150 enemy sorties. His attacks were effective and further reduced our air operations which were already hampered by lack of airdrome capacity. Heavy and medium bomber operations in the Visayas required staging through Tacloban airdrome on a carefully integrated timing of flight schedules and likewise reduced the scale of our operations.

Mindoro

In following the SWPA principle of making amphibious forward movement only within sup-

porting operational radius of land-based air an intermediate base was required between Leyte and Lingayen to cover operations within the Central Luzon Plain. Another factor requiring a further base was weather which hampered Leyte's airdrome development to the extent that only a fraction of the strength of the Fifth AF could be brought to bear against the Japanese air force in the Philippines. At this time of year the west side of the Philippines has better weather than the east side. Mindoro, within fighter cover range of Leyte and capable of easy development, was selected for the new base with D-Day set for 5 December. As the date for the operation approached it became apparent that air strips at Leyte for basing fighters were not being completed quickly enough by the Sixth and later Eighth Armies. When the weather forecast made it look doubtful that fighters from Tacloban could get over Mindoro on D-Day and D-1, General Kenney requested GHQ to supplement the cover of Mindoro forces by including CVE's in the convoy until D-Day only, at which critical time they would retire. At the suggestion of CinC POA and Com Third Fleet, the landing was postponed until 15 December. This was done because of the Third Fleet's requirement to refuel and rearm to cover the withdrawal of the Seventh Fleet beyond D plus 1 Day, and to give an additional 10 days' construction of airdromes for land-based air.

The task force at Mindoro was unopposed in its landing but a Japanese naval task force appeared to threaten the garrison before adequate air or light naval forces had been established. Our main naval force was en route in its return to Leyte and was unable to return to Mindoro in time for the engagement in daylight. However, the night of 26 December, a small force of fighters and one squadron of strafers took the enemy task force under attack and drove off the entire force in a brief but savage engagement in which one destroyer was sunk, and three destroyers and two cruisers were damaged. No appreciable damage was sustained from enemy bombardment.

The securing of Mindoro and development of airdromes thereon permitted the normal Fifth AF plan of air development. This plan was to bring forward fighters followed by strafers and heavy bombers as rapidly as airdrome facilities

were available. The heavy sustained coordinated attacks of the air force team of fighters and bombers had been proven by experience the only effective means of destroying an enemy air force in an area such as Luzon where sufficient airdromes existed to permit effective dispersal and shifting of forces.

Before the launching of the Lingayen operation air forces in the Philippines had:

a. Neutralized enemy air forces in central and southern Philippines and initiated attacks on Luzon.

b. Severed enemy sea lines of communication to the Philippines and destroyed large tonnages of enemy shipping.

c. Accomplished the destruction of large numbers of enemy troops through shipping attacks and ground support operations.

d. Made enemy movement throughout the Philippines virtually impossible by continued attacks on land and coastal movements.

Lingayen

The Lingayen operation was launched before the neutralization of Luzon was complete. The risk of moving a convoy under cover of CVE carrier air into an area in which the destruction of the enemy air force was not complete was again accepted.

To cover the approach of the Bombardment Task Force and the assault forces a maximum air effort was expended to counter the serious Kamikaze threat. Three air units were assigned the task. First the Third Fleet was to neutralize all bases north of an east-west line through Lingayen Gulf. Second the Far East Air Forces with the Fifth AF as its principle combat unit was given the tasks of (a) isolating the landing area and of (b) neutralizing airdromes on Luzon South of the east-west line through Lingayen Gulf. Either FEAF or Third Fleet could cross the boundary line by previously announcing strike plans. The third force was the Seventh Fleet Air composed of 10 CVE's in the Langayen Assault Task Force. The task prior to D-Day of the Seventh Fleet Air was that of providing local air cover for the Assault Task Force.

Heavy attacks were accomplished against Clark Field by Third Fleet air on 14, 15, and 16 of December. However, from then on until the naval Assault Forces reached Lingayen the neutralization task fell to FEAF. The Japan-

ese air in the Philippines was destroyed as an effective air unit. In spite of heavy destruction the enemy was able to save some miscellaneous aircraft which were later committed in sporadic suicide attacks. The majority of these suicide aircraft were committed between the 4th and 10th January. In this period, although weather hampered FEAF operations, on 6 January an effective attack was made on Luzon airdromes. During this period the Third Fleet extended their cover over the whole of Luzon on 6 and 7 January in order to neutralize enemy air. In spite of excellent coverage, the enemy was still able to launch 19 successful Kamikaze attacks during the 2 days. Following this period, the enemy having committed his scattered remnants of an air force, Kamikaze attacks all but ceased. It was apparent that despite an overwhelming preponderance of friendly air it is impossible to prevent the launching of small sporadic attacks from well dispersed airdromes or to completely stop these sporadic enemy Kamikazes in the air.

The principal missions of the Far East Air Forces as soon as established at Lingayen were:

a. To keep the enemy air force on Luzon neutralized and initiate attacks on Formosa at the earliest practicable date.

b. Attack and sever land lines of communications.

c. Support the ground forces.

d. Cut enemy sea lines of communication within range.

(Prior to this time close air support of landing operations was furnished by CVE's.)

The sustained attacks on the Japanese airdromes in Luzon reduced their effectiveness completely and no further threat from these airdromes developed. As soon as this mission was complete and staging bases in Luzon were established, the neutralization of Formosa began. The first attacks were launched in January 1945 and continued in their intensity until by 1 April there were no remaining lucrative targets in Formosa.

Attacks on enemy lines of communication on Luzon were extremely profitable and by mid-January the Fifth AF had damaged or destroyed the following:

79 locomotives.

456 railway cars.

468 motor cars.

67 staff cars.

18 tanks.

In close support of the ground forces on Luzon, the Fifth AF flew 47,250 sorties and dropped 38,900 ton of bombs. Letters to ground force commander, the low casualty figures of our ground force units in comparison to the tenacious enemy resistance and the number of enemy casualties inflicted attest to the effectiveness of this air support. As many as 300 fighters, each carrying napalm belly tanks, were utilized in concentrated attacks on small enemy strongholds.

Attacks on enemy sea lines in the South China Sea began as soon as reconnaissance and strafter airplanes were based in the Philippines. Regular attacks reaching the China and Indo-China coast quickly weakened the lines of communications from the southern empire to the homeland of Japan and by 12 May 1945 these lines were completely severed. Since the beginning of the war submarines played an effective role in these operations against enemy shipping in the South China Sea, but their attacks had not yet been able to halt Japanese shipping without the assistance of airplanes which could reach into every harbor. The Navy carrier force made a one-day attack at Touraine and Saigon and another one-day attack at Hongkong and daily coverage was maintained by FEAF planes.

PHASE IV. PREPARATION FOR FINAL ASSAULT ON JAPAN

JCS directive 713/19 dated 3 October 1944 directed General MacArthur to establish bases in Luzon from which to support further advances, and to provide support for the occupation of the Ryukyus Islands. CinC POA in this same directive was directed to occupy one or more positions in the Ryukyus Islands with target date of 1 March 1945.

Subsequent theater directives to the Fifth AF, which was agreed to by CinCPOA, gave the Fifth AF the missions of: (a) conducting reconnaissance to the west of Okinawa (b) assisting in the neutralization of Formosa (c) continuing cutting of the Japanese life line to Asia (d) continuing the clean up of the Philippines.

To meet requirements to support South Pacific Forces in the Okinawa campaign pri-

ority was given to the reconstruction of the Clark Field Air Base and to the development of Laoag as an advance staging base. The attacks against Formosa were carried out concurrently with the clean up of Philippines by the Fifth AF. The success of the neutralization was attested to by the negligible number of enemy aircraft that were able to stage through Formosa's 53 airdromes to attack the Okinawa task forces. Interrogations and documents obtained after the surrender show that Kyushu based suicide planes made practically all the Kamikaze attacks against Okinawa. Pilots were instructed to fly South and then West and to approach Okinawa from the West or the Southwest, so as to create the impression that they were operating from Formosa. Constant individual reconnaissance by H2X and LAB B-24s of the Fifth AF kept Japanese surface craft and sea ports in assigned areas constantly under surveillance and harassing attack. The scale of effort expended by the Fifth can best be gauged by the fact that 15,315 tons of bombs were expended on Formosa in 7,690 sorties. In addition, day fighter sweeps and night intruder missions over Formosa made air movement of any kind hazardous for the Japanese. Formosa's great potential of being a serious block to our advance and to supply Japanese counter attacks was quickly and effectively nullified by air action alone.

In JCS 1331/3 25 May 1945 General MacArthur as Cinc Army Forces Pacific was directed to invade Kyushu on 1 November 1945 in order to:

1. Destroy and contain major forces of the enemy.
2. Assist in any further advances.
3. Increase current effort in air bombardment and blockading of the home islands.

The Fifth AF objective in the softening up of any amphibious assault beachhead was to so blast the enemy's prepared defenses and demoralize the defenders that the ground troops would be able to walk ashore with their weapons slung over their shoulders. In preparation for the aerial assault on Kyushu, our airdrome capacity was the first requirement, so that concurrently with the ground cleanup on Okinawa every possible effort was put into the development of airdromes on Okinawa and Ie Shima.

To simplify the command situation on Okinawa, the invasion of which had been launched as a CincPOA campaign, the control of the Ryukus Islands and army units thereon was transferred to Cinc RFPAC on 18 July 1945. All AAF units, except USASTAF, now came under the Commanding General, Fifth AF, for coordination and control. The Fifth AF assault on the Japanese homeland which began with the arrival of the 35th Fiter Group on Okinawa on 2 July 1945, now continued completely under Army Air Force control. The Okinawa and Ie Shima airfields were kept saturated with aircraft as rapidly as engineering effort could produce space, so that by the 14th of August, when hostilities ceased, 1,065 aircraft, representing 60 percent of the Fifth AF, were in position pounding the Japanese. During the neutralization period in July and August the Fifth AF released a series of attacks against communications, airdromes, shipping and industrial areas of Kyushu and Southern Honshu in which all the lessons learned in the Pacific war were used. Fragmentation bombs, napalm, strafing and high explosives were used in coordinated attacks that left the enemy dazed with their suddenness and intensity.

Subsequent to peace the Fifth AF was assigned two missions. The first was the transportation, with the assistance of ATC, of the occupation units to enforce the preliminary peace. Weeks were saved by this method of entry into Japan. Details of this maneuver are contained in Section VI of this report. As a supplementary mission thousands of released Allied POWs were flown out of Japan. As a final mission the Fifth AF was assigned as the Occupation Air Force for Japan and Korea.

CONCLUSIONS

Performance in the Air Campaigns had lead to the following conclusions, that:

- a. The land masses and islands of the South and Western Pacific are so situated that sufficient areas were available for the operation of land-based aircraft to follow the pattern of any scheme of maneuver employing sizable forces.
- b. Sustained air operations conducted for a duration and in a volume proportionate to the strength of the target are a primary requirement prior to invasion.
- c. In the Southwest Pacific island structure,

no battlefield could be logistically supported without continuous air superiority.

d. Land-based aircraft alone could have prepared for and tactically supported the scheduled operations in the SWPA had the schemes of maneuver continued to call for that manner of accomplishment.

e. Naval carrier forces could be effectively employed in conjunction with land-based air.

f. The Japanese concept of defense was establishment of isolated points of resistance was in itself no deterrent to our operations. The occupation of Hollandia clearly demonstrated this point.

g. As the Pacific war was fought it demonstrated that aircraft range was the paramount factor in the neutralization of enemy power. The ability to destroy, however, began at the nearest target and extended to the limit of the radius of action.

h. The effective neutralization of opposing land-based aircraft could only be effected by sustained attack in force. Piece-meal or limited operations did not accomplish this.

i. As the Pacific war was fought, the adequate defense of an objective from air attack could not be obtained solely by employing the means of defense at the objective, although such defense could limit the size of the force which could infiltrate.

j. The best defense against attack is the possession of the longest ranged offensive air weapons with which to neutralize the enemy at distances greater than his own ability for counter-action.

k. The priority of targets for air operations in the SWPA was effective.

(1) Primary—Destruction of enemy air force wherever in operation or in assembly—in the air, on the ground, in the factories, bauxite in vessels, or gasoline any place.

(2) Secondary—Imobilization of activity—shipping, rail, bridges, motor columns, any movement of any sort (including power sources), and immediate close support of Army action.

(3) Tertiary — Paralyzation of industrial areas, centers of population and supply points, and the denial of concerted enemy naval interference with operations.

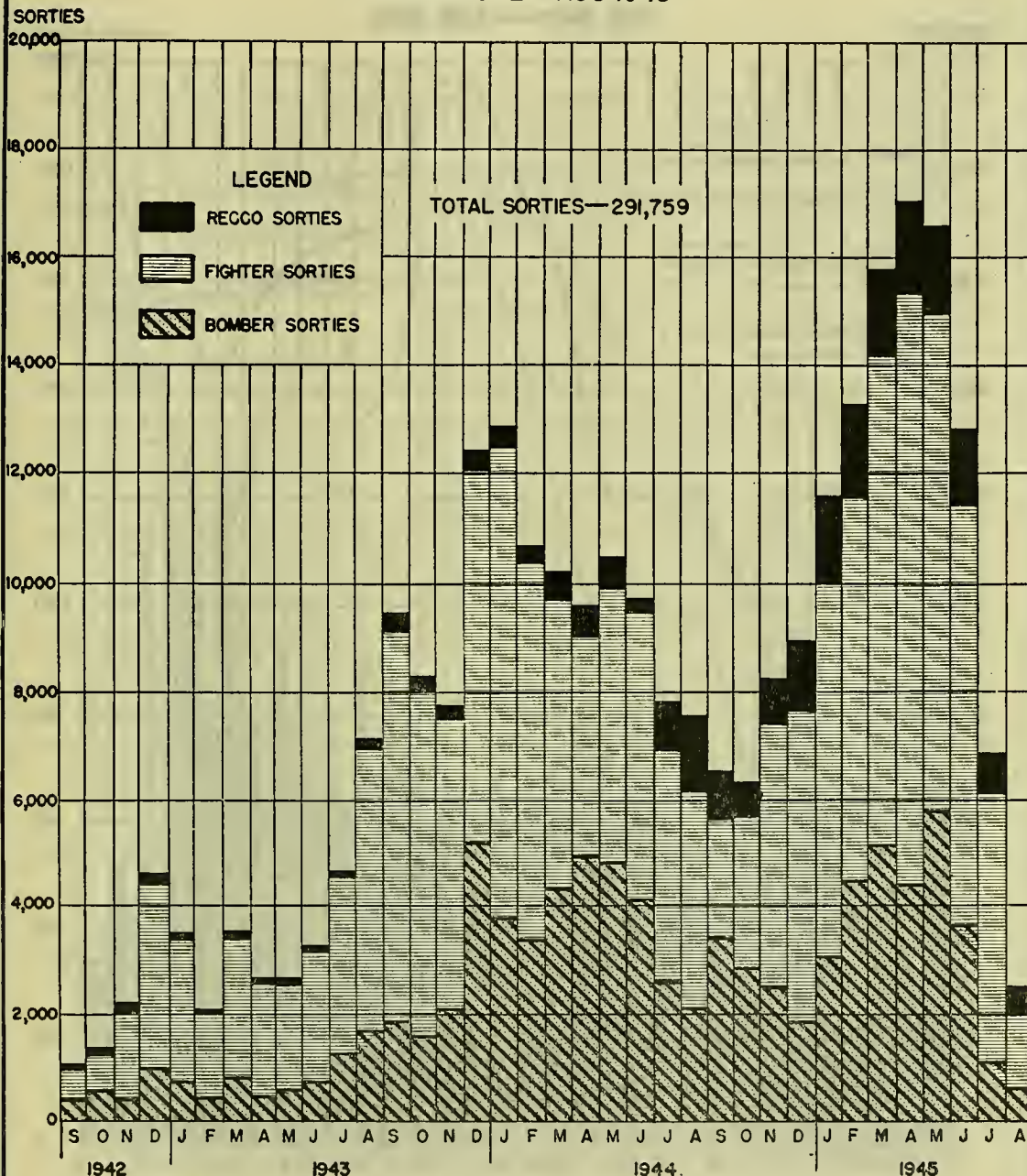
l. The tactics of using combat aircraft at low altitude with long low approaches defeats radar detection and gets surprise. We repeatedly killed mechanics working on airdromes.

m. Air transport alone can support substantial intra-theater operations. With air superiority and proper objective preparation, an area can be seized and maintained by air operation alone subject to the limitation of the rate at which cargo must be delivered.

SECTION IV
TOTAL FIFTH AF EFFORTS AND RESULTS

5TH AF EFFECTIVE SORTIES FLOWN

SEPT 1942—AUG 1945



NOTE: INCLUDES ONLY AIRCRAFT REACHING TARGET

SOURCE: 34TH SCU MONTHLY STAT SUMMARIES

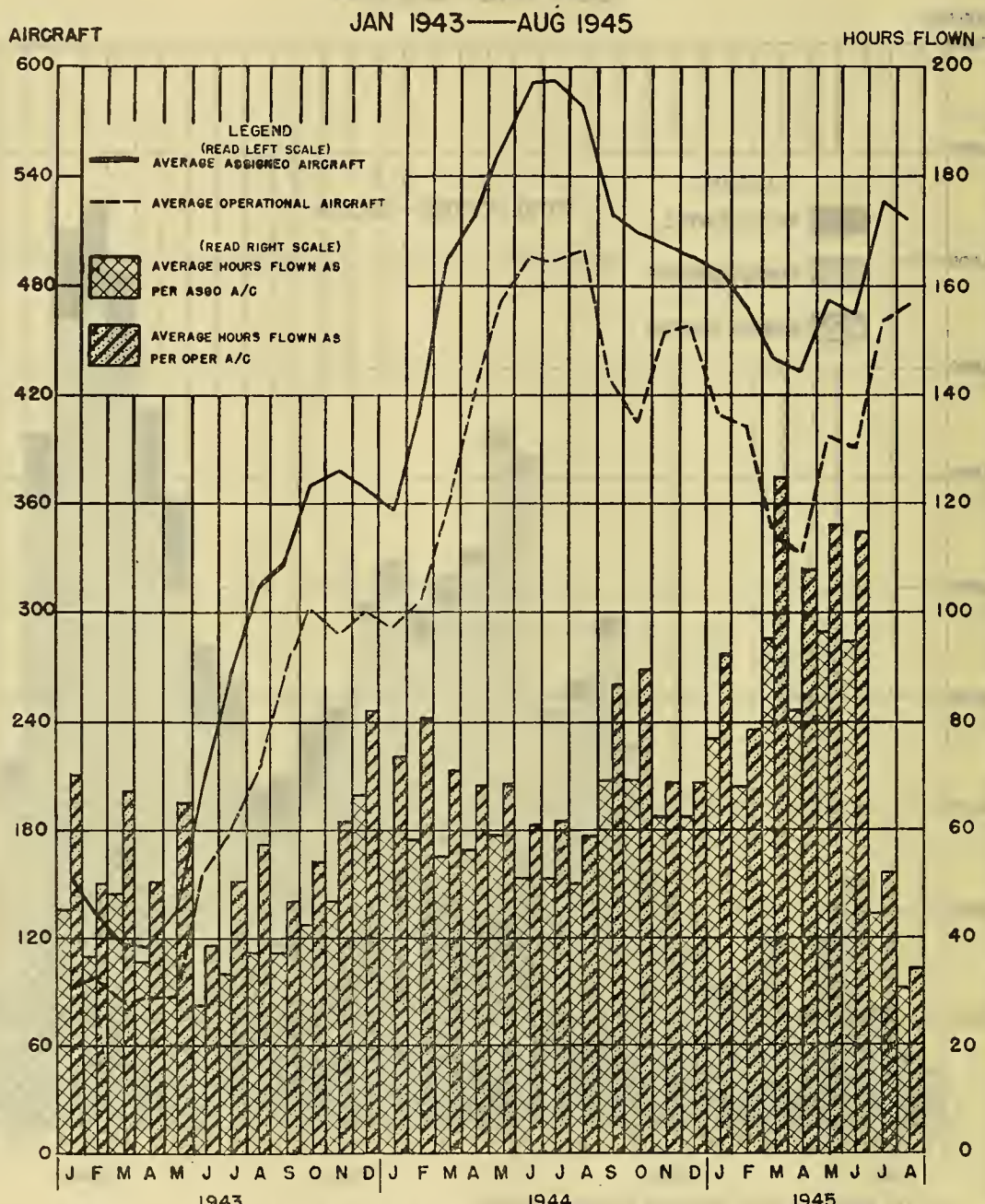
U.S. STRATEGIC BOMBING SURVEY

5TH AF REPORT

SECTION II

FIGURE 19

5TH AF ASSIGNED AND OPERATIONAL BOMBERS AIRCRAFT HOURS FLOWN



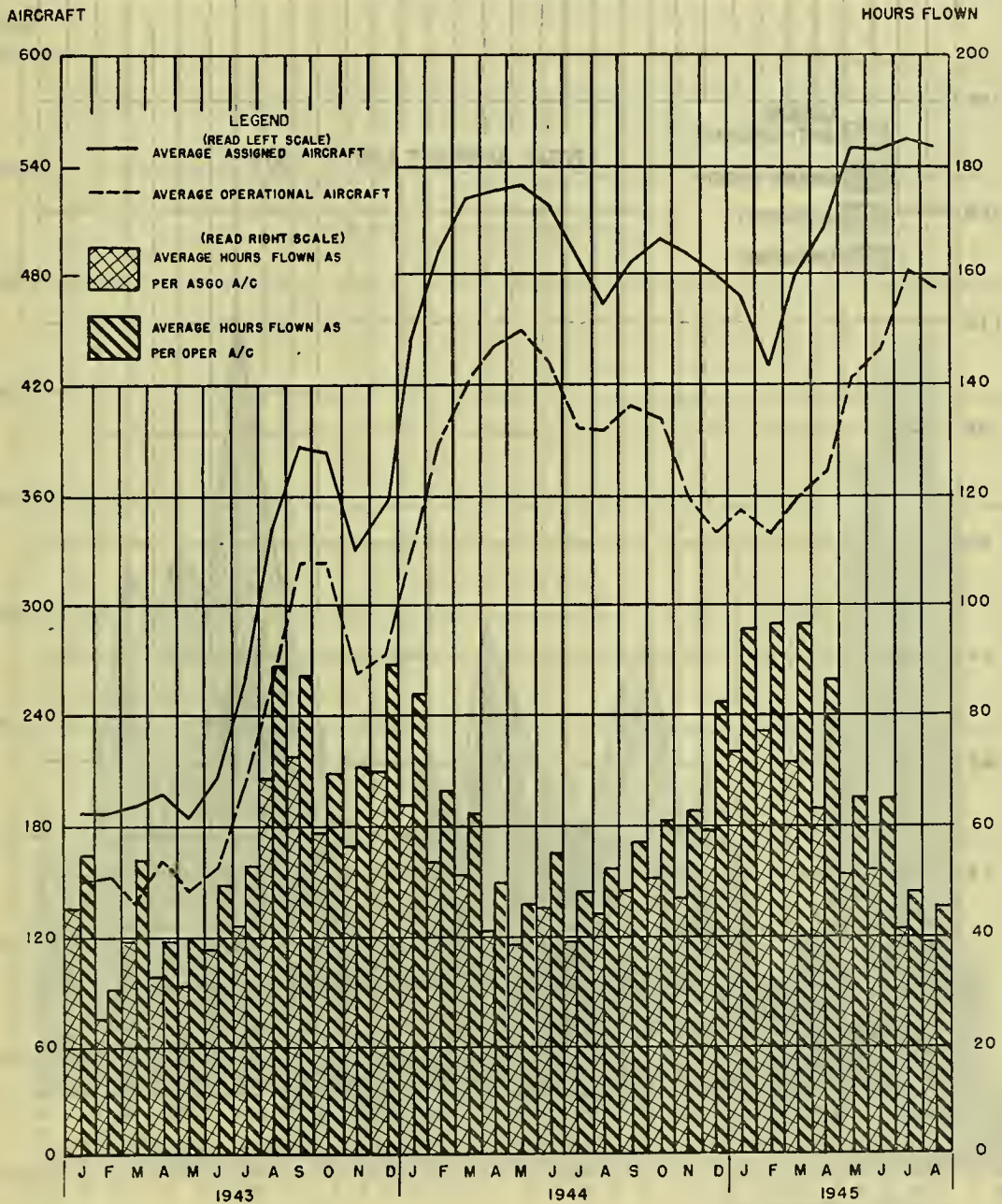
SOURCE: 34TH SCU MONTHLY STAT SUMMARIES

U.S. STRATEGIC BOMBING SURVEY
 5TH AF REPORT
 SECTION II
 FIGURE 20

5TH AF ASSIGNED AND OPERATIONAL FIGHTERS

AIRCRAFT HOURS FLOWN

JAN 1943 — AUG 1945



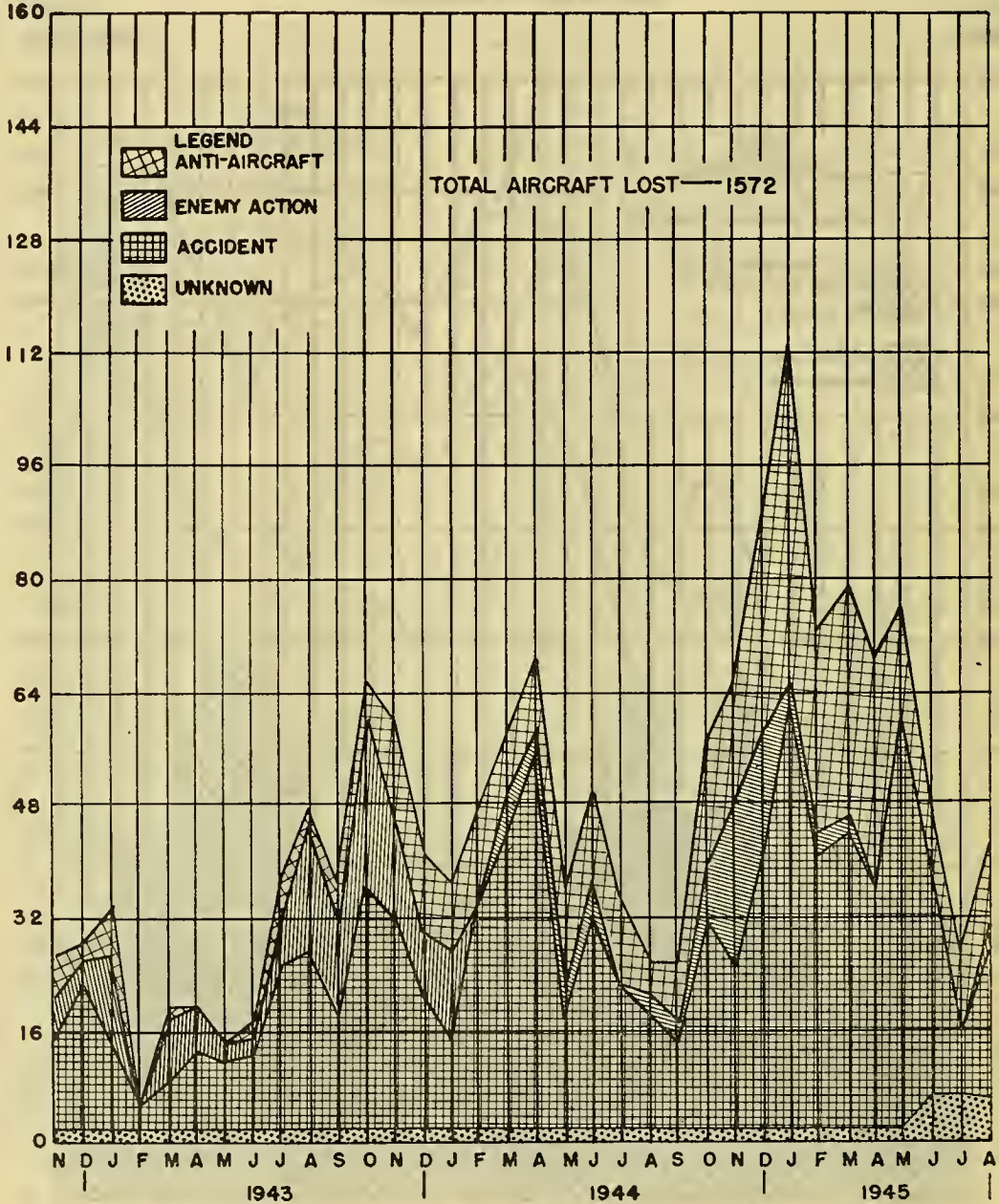
SOURCE: 34TH SCU MONTHLY STAT SUMMARIES.

U S STRATEGIC BOMBING SURVEY
 5TH AF REPORT
 SECTION II
 FIGURE 21

5TH AF AIRCRAFT ATTRITION

NOV 1942 — AUG 1945

AIRCRAFT



SOURCE: AAF FORMS 34

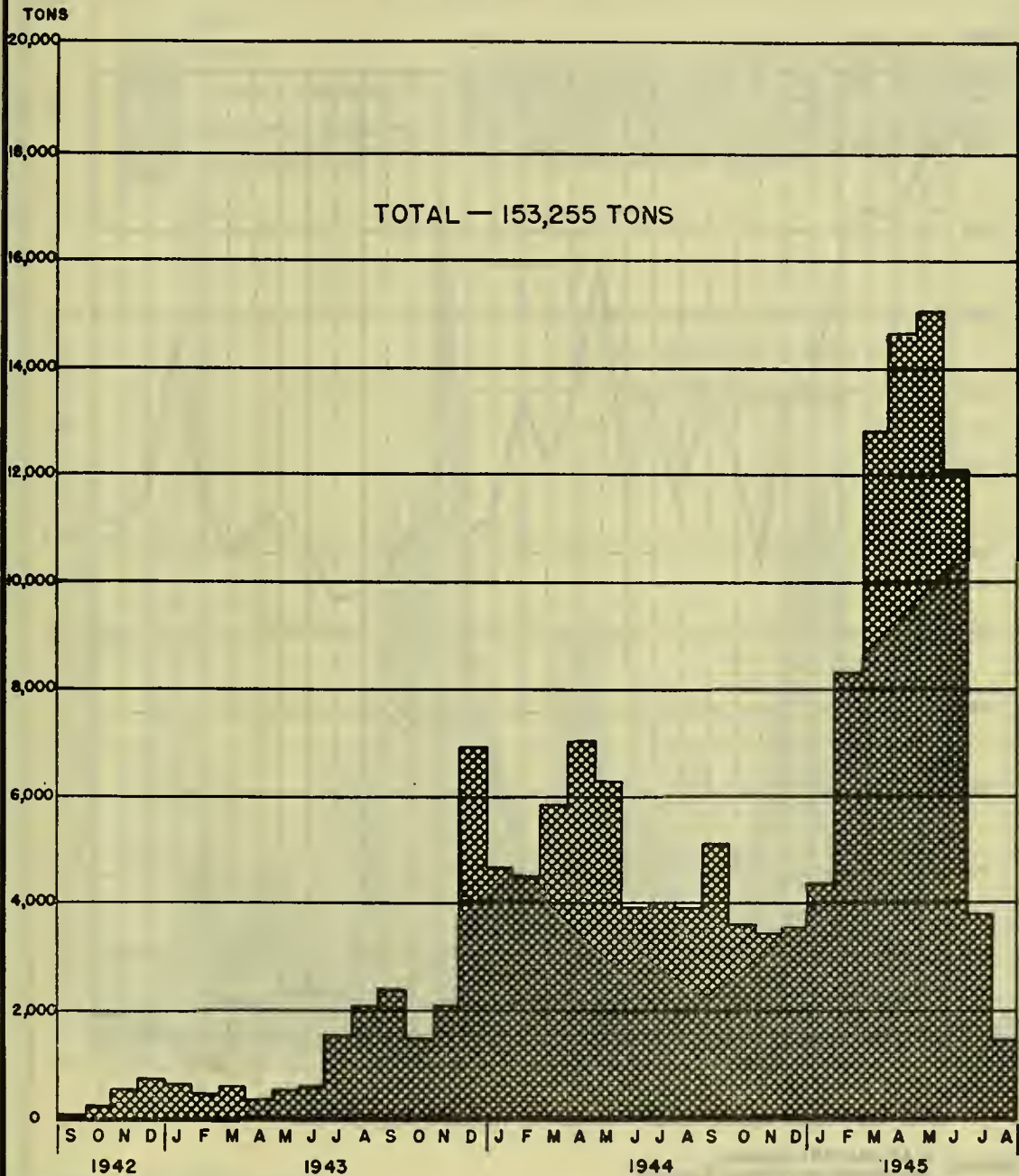
U. S. STRATEGIC BOMBING SURVEY

5TH AF REPORT
(SECTION II)

FIGURE 22

5TH AF TONS OF BOMBS DROPPED

SEPT 1942—AUG 1945



SOURCE: AAF FORMS 34.

U.S. STRATEGIC BOMBING SURVEY

5TH AF REPORT
SECTION II

FIGURE 23

5TH AF DISEASE INCIDENCE COMPARED WITH BATTLE CASUALTIES

DEC 1942 — AUG 1945



NOTE: ALL FIGURES ARE EXPRESSED IN RATES PER THOUSAND MEN PER YEAR

SOURCE: 5 AF ADJUTANT GENERAL
AIR SURGEON STATISTICAL SUMMARY

U. S. STRATEGIC BOMBING SURVEY

5TH AF REPORT
(SECTION II)

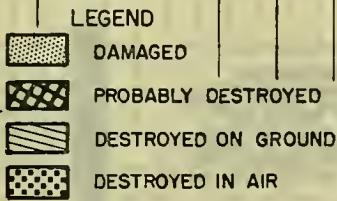
FIGURE 24

DESTRUCTION OF ENEMY AIRCRAFT

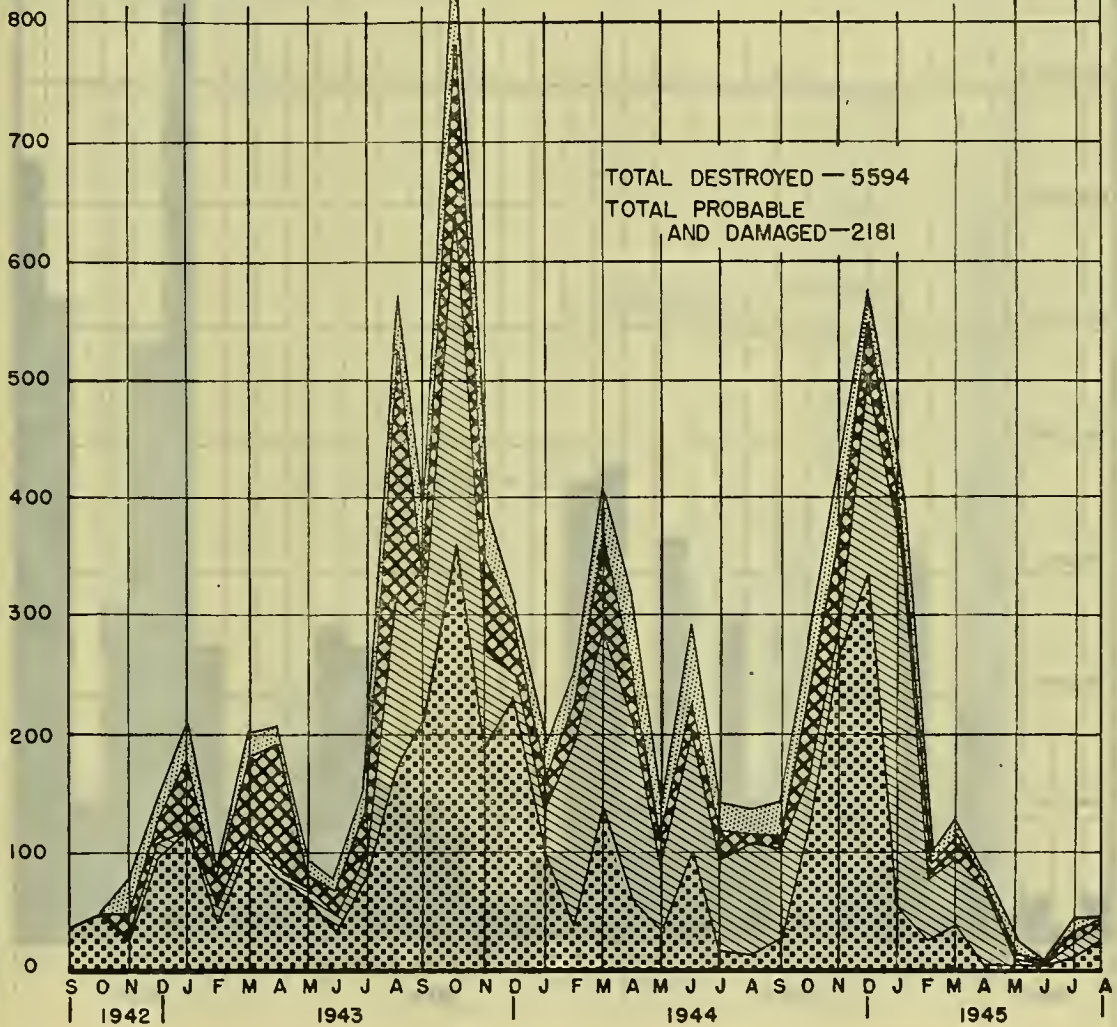
COMBAT CLAIMS OF 5TH AF

SEPT 1942—AUG 1945

AIRCRAFT
1000



NOTE: THESE FIGURES HAVE BEEN TAKEN FROM THE COMBAT RECORDS OF THE FIFTH AIR FORCE. NO OTHER ANALYSES OF DESTRUCTION ARE AVAILABLE AT THIS TIME FOR COMPARISON THE CLAIMS WERE MADE IN CONFORMITY WITH DIRECTIVES FROM THE JOINT CHIEFS OF STAFF. PHOTOGRAPHIC INTERPRETATION HAS BEEN USED IN ASSESSING DESTRUCTION OF AIRCRAFT ON THE GROUND.



U. S. STRATEGIC BOMBING SURVEY

5TH AF REPORT

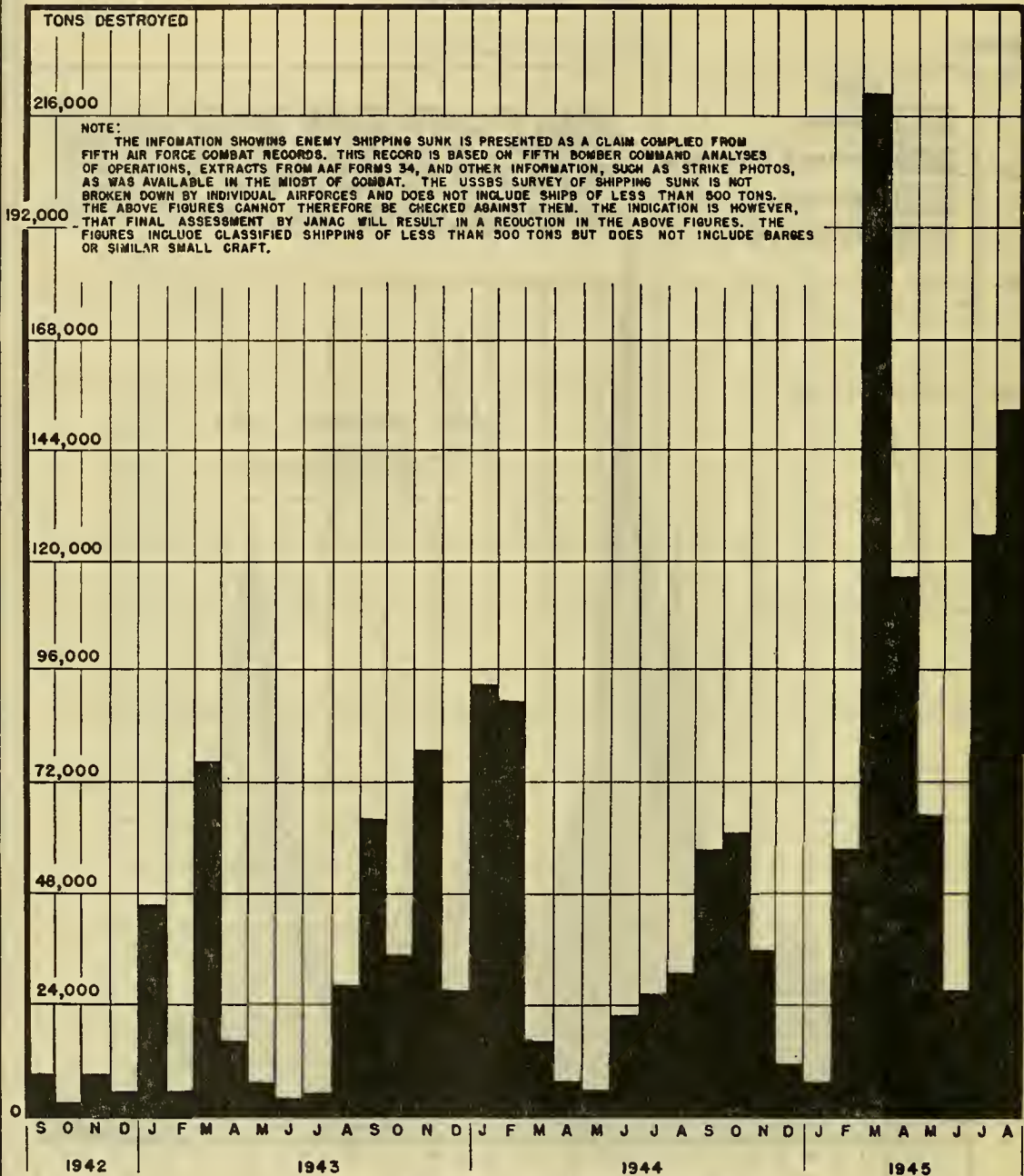
SECTION II

FIGURE 25

ENEMY SHIPPING DESTROYED

COMBAT CLAIMS OF 5th AF

SEPT 1942 - AUG 1945



TOTAL DESTRUCTION ---1,705,542 TONS

U.S. STRATEGIC BOMBING SURVEY

5TH AF REPORT
SECTION II

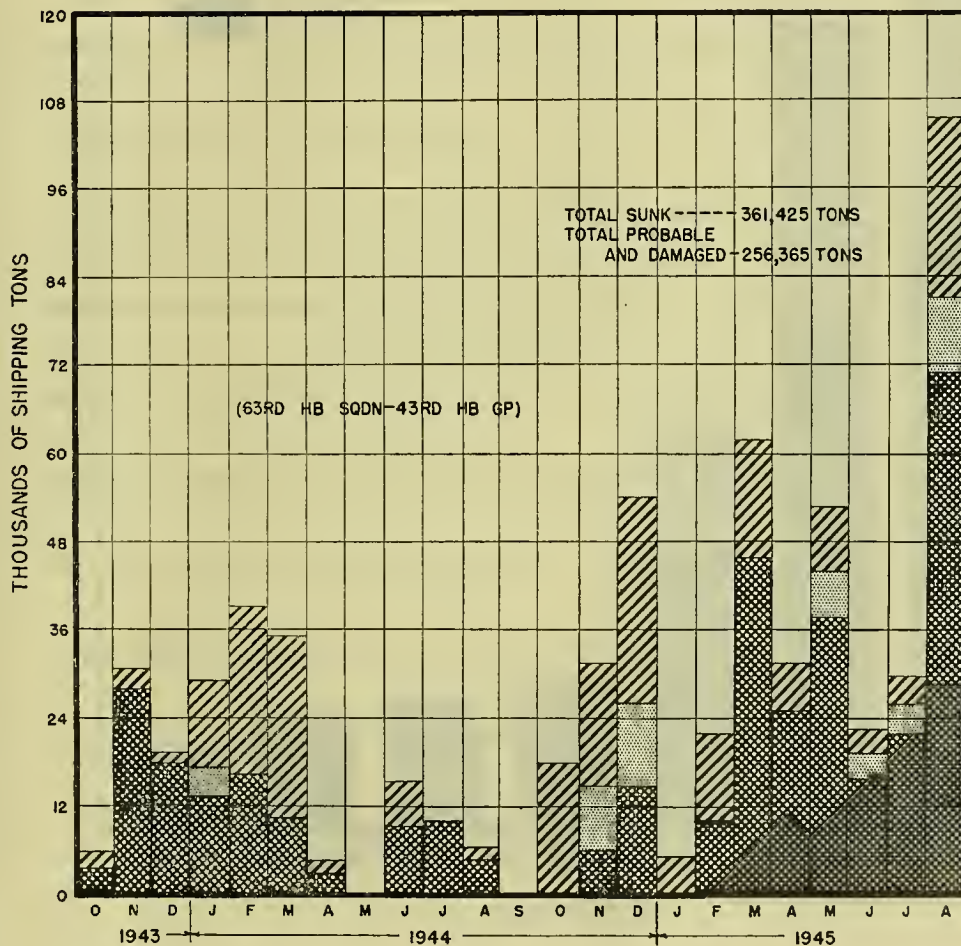
FIGURE 26

JAPANESE SHIPPING SUNK BY LOW ALTITUDE RADAR BOMBING

COMBAT CLAIMS OF 5TH AF

OCT 1943 — AUG 1945

THE INFORMATION SHOWING ENEMY SHIPPING SUNK IS PRESENTED AS A CLAIM COMPILED FROM FIFTH AIR FORCE COMBAT RECORDS. THIS RECORD IS BASED ON FIFTH BOMBER COMMAND ANALYSES OF OPERATIONS, EXTRACTS FROM AAF FORMS 34, AND OTHER INFORMATION, SUCH AS STRIKE PHOTOS, AS WAS AVAILABLE IN THE MIDST OF COMBAT. THE USSBS SURVEY OF SHIPPING SUNK IS NOT BROKEN DOWN BY INDIVIDUAL AIRFORCES AND DOES NOT INCLUDE SHIPS OF LESS THAN 500 TONS. THE ABOVE FIGURES CANNOT THEREFORE BE CHECKED AGAINST THEM. THE INDICATION IS HOWEVER, THAT FINAL ASSESSMENT BY JANAC WILL RESULT IN A REDUCTION IN THE ABOVE FIGURES. THE FIGURES INCLUDE CLASSIFIED SHIPPING OF LESS THAN 500 TONS BUT DOES NOT INCLUDE BARGES OR SIMILAR SMALL CRAFT.



- LEGEND
- DAMAGED
 - PROBABLE SUNK
 - SUNK

U.S. STRATEGIC BOMBING SURVEY

5TH AF REPORT
SECTION II

FIGURE 27

DISTRIBUTION OF BOMB TONNAGE

Computation of the distribution of Fifth AF Bomb tonnage, as furnished by the tabulating section of USSBS, included 49,277 tons dropped as "unidentified targets," so called because of difficulty in extracting information from the Forms 34. Unless personnel doing this work are thoroughly familiar with operations and nomenclature of Pacific Island areas, classification by type of target is extremely difficult.

From Forms 34 and other basic documents in Japan, personnel of Fifth AF compiled a similar tonnage distribution study. While total tonnage figures differed slightly, "unidentified"

target tonnage was negligible. Accordingly the tabulation section's computations have been adjusted on a relative percentage basis. The over-all total remains the same.

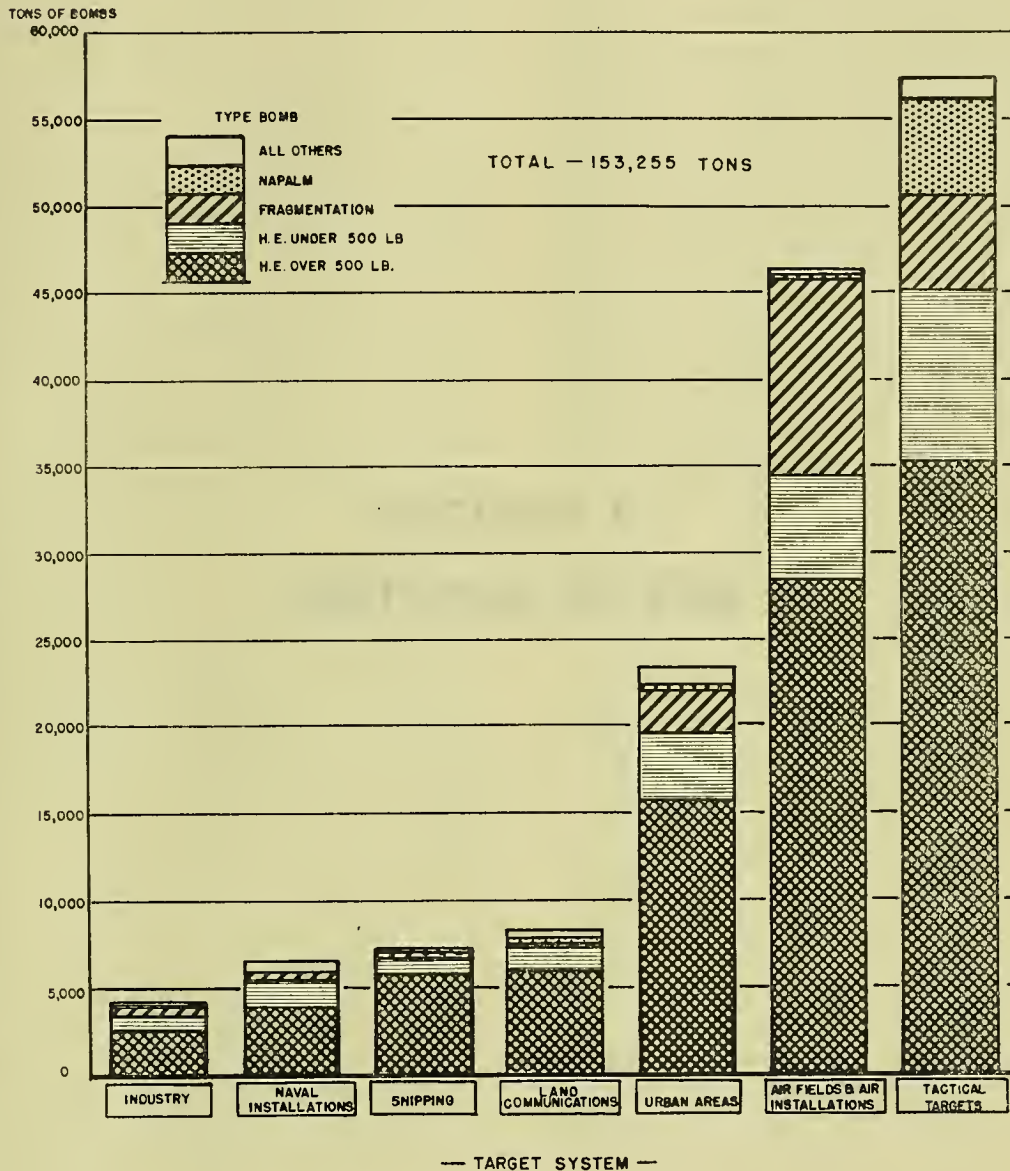
The Fifth AF study revealed that the tabulated distribution between "napalm" and "other incendiaries" required correction. Since the Fifth AF had done considerable pioneering with napalm, particularly as a ground cooperation weapon, accurate records had been maintained as to amounts employed, again totals remain the same as in the Tabulation Section's reports.



5TH AF BOMB TONNAGE DROPPED AT PRINCIPAL TARGET SYSTEMS

BY TYPE BOMB DROPPED

SEPT 1942 — AUG 1945



U. S. STRATEGIC BOMBING SURVEY

5TH AF REPORT

SECTION II

FIGURE 2B

SECTION V
FORTUNES OF WAR

EXAMPLES OF ACTION WITH INTER-THEATRE IMPORTANCE

Bismarck Sea Battle

As has been previously shown, enemy Air Forces and enemy shipping were the primary targets of Fifth AF.

Japanese advance as planned and executed was rapid and secure enough to maintain at all times protected sea routes, adequately covered by land-based air. During his offensive thrust this fact proved satisfactory to him. This precluded the necessity of developing an air transport system. His airplane production could be concentrated on combat types in which he anticipated a high rate of attrition. Thus, surface transportation was the enemy's only medium of invasion, supply, reinforcement, or evacuation on any appreciable scale.

Destructive inroads on shipping had been accomplished by high and medium level visual bombardment by early 1943. Low clouds over water with the passage of the intertropical weather front required low level attack to sink ships. Torpedo attack was not feasible because of the limited range of current torpedoes and lack of sufficient available fighter strength to cover such operations.

To meet this problem constant experimentation and training had been engaged in for months. The development of skip bombing or masthead height attack covered by maximum gun power strafing on approach seemed to be an adequate answer. Exhaustive rehearsals of coordinated skip bombing strikes were made in February 1943 and the weapon appeared adequate for its assigned task. This training was to be invaluable by its use in stopping Japanese shipping in the Bismarck Sea.

The Japanese position in British New Guinea was precarious early in 1943. He had been driven from Papau. His troops in Lae-Salamaua-Huon Peninsula area were underfed and were badly in need of supplies and reinforcement against the growing Allied offensive. To lose the Lae area meant the loss of control of Vitiiaz Straits and the seas off the Southeast New Guinea coast.

Previous attempts by the Japanese at reinforcement had resulted in the loss of portions of small convoys, but the cost had not proved excessive and the need was considerably greater after the capture of Papua by Allied forces.

One division could probably turn back the Allied threat and certainly prevent an advance of the then available Allied ground forces. A large augmented convoy generally estimated at 16 ships was formed in the Rabaul area by the enemy and dispatched for Lae under cover of cloudy weather to effect this reinforcement. The first elements of this movement were picked up by our reconnaissance at 1600 local time, 1 March 1943. All available airplanes were alerted and the ships were under attack in increasing tempo and force, up to the climax of 3/4 March, when the enemy effort was destroyed. A second convoy of six to eight ships may have followed the first. These convoys reached waters south of Vitiiaz Straits and were there completely disrupted. The facts of the naval-air action remain partially in doubt but the result was clear—a strongly reinforced naval convoy had been prevented from accomplishing its assigned mission of penetrating our air superiority to land troops at Lae. United States Strategic Bombing Survey reports list the following ships sunk:

Kyokusei Maru	AK
Kokoku	AK
Oigawa	AK
Shinai	AP
Taimai	AP
Kenbu	APAK
Teiyo Maru	APAK
Aiyo	AC
Shirayuki	DD
Asashio	DD
Arushio	DD
Tokitsukaze	DD

Total12

No final assessment of damaged or probably sunk has been completed. The remainder of the two convoys never completed their mission.

This movement was covered heavily by Japanese naval air. It is difficult to make an accurate assessment of aircraft destruction because of the confined area of these operations in which so many sorties were flown. An estimate is that which is officially claimed by Fifth AF (and is believed to be a minimum)—60 enemy destroyed and 39 probably destroyed. The action demonstrated to the enemy the inadequacy of his best air cover in the face of American attack.

The attacking American force was composed of: 66 B-25s, 22 A-20s; 23 Beaufighters; 85 B-17s; 11 B-24s; 72 P-38s and 57 P-40s. The cost was: 1 B-17; 1 B-25; 1 Beaufighter and 3 P-38s.

The mission of Fifth AF as executed had a far reaching effect on the enemy. Japanese reaction to the shock was apparent along his entire chain of command. Not until the Leyte campaign, did he again attempt to reinforce or supply in force a beleaguered battlefield in range of American medium bombardment.

As a result, the enemy resigned his force in British New Guinea to a delaying action. He later retired these forces by land, in stages, to the Wewak area, where they were isolated and by-passed.

Attrition of Japanese Naval Air Force

Japanese Offensive Plan. In the enemy's offensive, his most determined thrust was through the Solomons toward New Caledonia and Fiji. Reasoning from the Japanese viewpoint: Australia constituted the greatest threat to his most sensitive area, Netherlands Indies-Philippines. Australia was weak, having air power of less than one hundred combat airplanes, insufficient shipping and small ground forces (some inexperienced American troops and Australian Militia constituting the principal troops). Without substantial reinforcement Australia was impotent and could be effectively neutralized by cutting communication to the East, on which it was wholly dependent.

If he could extend his lines to New Caledonia and Fiji quickly enough, this neutralization would be completed. Adequate time would then be available to consolidate his own communications, and his position would be admirable "for fighting his hundred years of war," for which he had carefully prepared his people. Holding this position to the point of ultimate exhaustion of his enemies, he would finally accept a peace which would leave him in possession of the desirable parts of Netherlands Indies—Borneo—Celebes—Philippines, which had all the assets necessary for empire, and he had won his war.

Area of Operations. Geographically the Bismarcks area was well suited to this purpose. A fine harbor and facilities for a major supply terminus existed at Rabaul. Trans-shipment in

vessels of small tonnage would follow adequate supply with a minimum of tax on his merchant shipping. Originally two and later four first class airdromes for basing his striking air forces were available in "Vunakanau", "Lakunai", "Rapopo", and "Tobera." Rabaul was of major importance and exceeded Truk in installations.

Enemy Air Organization. In 1942 enemy air operation in Southwest and South Pacific areas was under Japanese naval air command. This force had the best equipment and personnel in the Japanese Air Forces.

(Japanese Army Air Forces at this time had the primary mission of offensive operations in Burma—China and defense of the Netherlands Indies.)

Rabaul as a Target. Rabaul provided the best available concentration of both primary targets of Fifth AF "air forces and shipping." Attack was begun on 23 February 1942 from Port Moresby. Succeeding strikes were made on March 13, 18, 19, 20 and 31; April 8 and 10; April 21 and 23 (B-17): May 4, 13, 14, 17, 24, 25, 28, 29 and 31. By the middle of May this target was attacked with regularity, at intervals corresponding to the time he required to rebuild his forces and to replace his losses.

Stubborn adherence to a preconceived plan was clearly evident in many instances but nowhere was this operational inflexibility more apparent than in the enemy's continuing to reinforce Rabaul with new air units and a good portion of that part of his airplane production allotted to naval air forces. He permitted himself to be bled of his resources by continuing to enrich a target that would obviously be repeatedly attacked by American air forces. After a large portion of the air garrison had been destroyed or rendered nonoperational by damage, a delay of a few days to a week would insure the presence of new air units and/or airplanes in strength.

Japanese Morale. Discouragement of enemy pilots, gunners and anti-aircraft crews was increasingly keen because of their inability to destroy the B-17. Many captured diaries and later interrogation reports support the fact that this had a depressing effect on enemy morale. This same fact naturally reacted inversely as a stimulant to American airmen.

Neutralization. A climax to the effort of

neutralizing enemy Air at Rabaul occurred 2 November 1943. The Trobriand Islands had been occupied for the purpose of securing a base within fighter-covered, strafing range of that target. Such a base was built on Kiriwina. Heavy raids in October and a final strike 2 November by B-25s and P-38s, completely surprised the enemy and resulted in such heavy destruction that it was obvious that Rabaul was no longer a satisfactory base for any kind of operations.

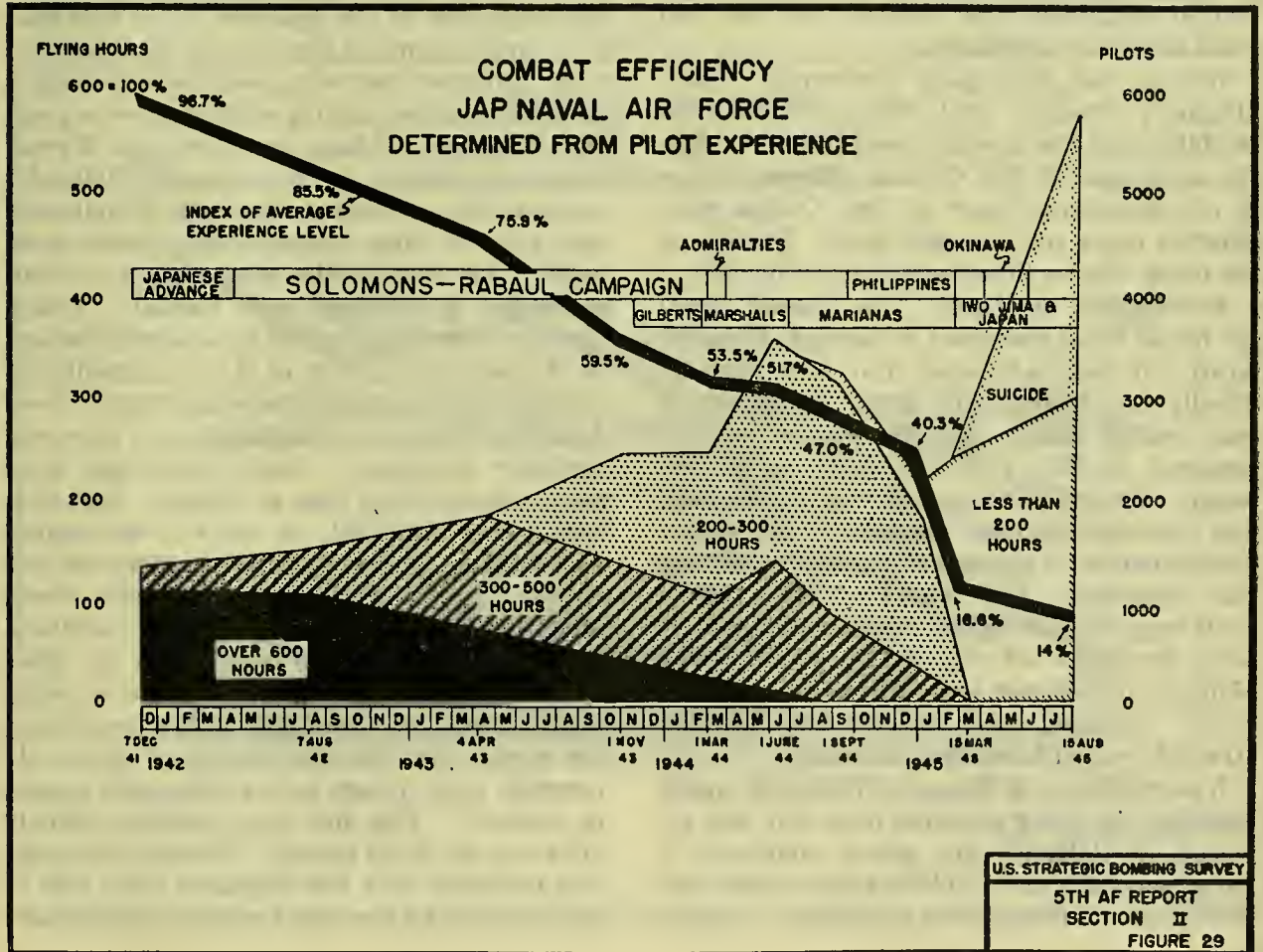
Effect on JNAF. It was not known early in the war that it was Japanese policy to garrison his outer defense perimeter with his most capable units, nor that he would feed these units into the Rabaul-Solomons area. This was true, however, and the result was the sapping of the striking capabilities of the whole Naval Air Force structure.

Concurrently with our Rabaul attacks American naval air forces were meeting and destroying strong elements of these Japanese naval air forces in the Solomons. The feeding of the

“first team” into Rabaul and the Solomons where it was destroyed by Fifth and U.S. Naval Air Forces cost the enemy the cream of his air force. Our 2 November strike was followed by a carrier strike on 5 November and South Pacific forces continued the neutralization of this target until it became a training ground for new pilots and air crews.

Early in November Japanese naval air forces in the Solomons and Bismarcks were ordered to retire in stages through the Mandates to the Empire “for reorganization and refitting” and the Theater Air Command went to Japanese Army air forces.

Results. Records of enemy destruction prior to September 1942 are not available, but from September 1942 to November 1943 inclusive 1750 airplanes had been destroyed in aerial combat and 613 on the ground by the Fifth AF, according to combat claims of that force. About twelve hundred of these were Rabaul based, some 500 of which were destroyed over our New Guinea bases



In the air blockade of Rabaul the Fifth AF estimates 373,000 tons of shipping had been sunk in the same period by our heavy and medium bombardment.

Fig. 29 illustrates the result of destruction during this period, reducing the experience level of Japanese Naval Air Forces. Lowering morale was obviously even more radically following a falling indicator line.

Attrition of Japanese Army Air Force

Wewak a Primary Base. As Rabaul became a more and more hazardous supply base for the enemy, an alternative became a greater necessity. Wewak was decided upon and enlargement of its facilities was an enemy priority. The harbor facilities were not adequate for large shipping but with Hansa Bay to the east it served for small ships and sea trucks. The enemy had lost in shipping and air forces at Rabaul to the extent that he abandoned the idea of evacuating his ground force there or even of supplying it. As in many isolated areas in the theatre, the trapped forces were informed that they must live off the land and could expect no assistance.

Wewak had four good airdromes, "But", "Dagua", "Boram" and "Wewak" and was established on the narrow enemy line which was the north coast of New Guinea. The mountains in the unexplored heart of New Guinea were effective cover for his right flank. The sea to the north was an effective barrier on his left.

Marshalling of JAAF. As enemy naval air forces were weakened at Rabaul, Japanese Army air was advanced into New Guinea. Finally the Fourth Air Army Headquarters was located there. Heavy construction was apparent in May 1943 and B-24 raids were begun. Enemy interception was determined, and the construction continued. A dogged determination to strengthen and hold this base was apparent. The results of these initial raids were heartening and many airplanes were being destroyed not only at Wewak but in the Madang-Alexishaven area. Reinforcement was quick, however, and enemy total combat strength was on a constant increase.

Neutralization of Wewak. The same enemy reaction was being repeated here that was apparent in Rabaul. The enemy continued to move new units and airplane replacements into Wewak as his forces were destroyed. Coincid-

ing with the beginning of Fifth AF operations from Dumpu, a decided increase in enemy strength was found at Wewak. A repeat of the October-November action against Rabaul was accomplished at Wewak in 17, 18 August 1943. B-25 strafers effected surprise and caught a large force in line on the four fields, some with engines turning. The raid resulted in destroying most of the enemy on the ground, and fighters destroyed most of those intercepting. These strikes were continued to a climax in February 1944. Some of his best units were broken here, and the resulting shock to the enemy was as apparent as at Rabaul.

After the capture of Lae-Nazab area in September 1943, our advance up the Ramu Valley was quickly effected by air transport and supply. KAPIT and Dumpu were captured. Near the latter, Gusap proved a good site for an advanced base from which fighter cover could be provided for attacks on Wewak.

Neutralization of Hollandia. During December 1943 construction at Hollandia indicated the disposition of the Japanese to use that base as a supply terminal and reserve base for Wewak. Humbolt Bay was a satisfactory anchorage and the three existing airdromes were good, with dispersal at Aitape and Tami. As Wewak became weakened, he strengthened Hollandia in proportion. When air strength at Hollandia was built to large proportions, attacks were begun. The same tactics were applied that had succeeded at Wewak and Rabaul. Heavy bombers in strength raided these airdromes and on the last two day days of March, immediately followed by strafing raids with fighter cover April 1 to 6 inclusive, Hollandia as a base was similarly destroyed. Destruction was even more complete here than at Wewak. Technical intelligence identified, by types from engines and fuselage plates, 340 enemy airplanes destroyed on the ground at Hollandia alone. Shortly after our occupation of Hollandia a document was captured which was an order from High Army Air Force Command relieving the Theatre Air Command with a reprimand for permitting "the destruction of Army air forces in New Guinea before they could engage in combat." This had been executed shortly after our last B-25 attack. Prisoner interrogation indicated very few airplanes were able to leave the area after these strikes. Pilots, air-

crews, engineering, and technical personal were critically short at this time and many of their best were driven into the jungles from Hollandia with no chance of evacuation. The effect was immediate and lasting on the Japanese AAF. They were disorganized to a point from which they never recovered. Later attacks by Fifth AF on Halmaheras were met with practically no resistance although his available airplane strength was high.

Results. In addition to the destruction of enemy airplanes (Fifth AF combat records show destroyed in the 5 months ending April 1944, 595 in the air and at least 490 on the ground), this neutralization caused a greater loss of air personnel, as the invasion of Hollandia was soon enough after this destruction to prevent the evacuation of pilots, air crewmen, maintenance and technical personnel. Isolation was complete and the air blockade destroyed (the Fifth AF estimated) 232,000 tons of shipping from December 1943 to April 1944, inclusive.

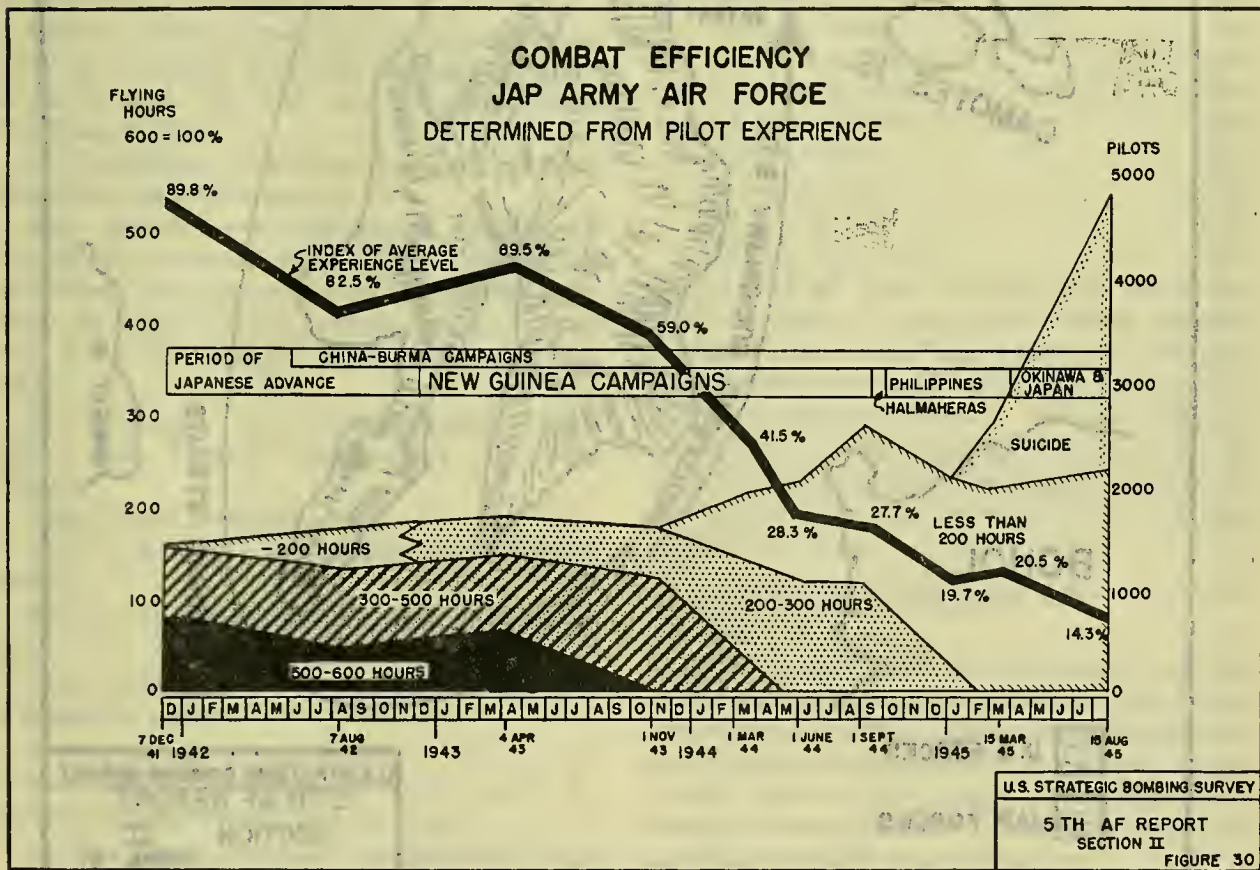
Fig. 30 illustrates the actual reduction of

pilot efficiency in Japanese Army Air Forces during this period.

Reinforcement of Ormoc

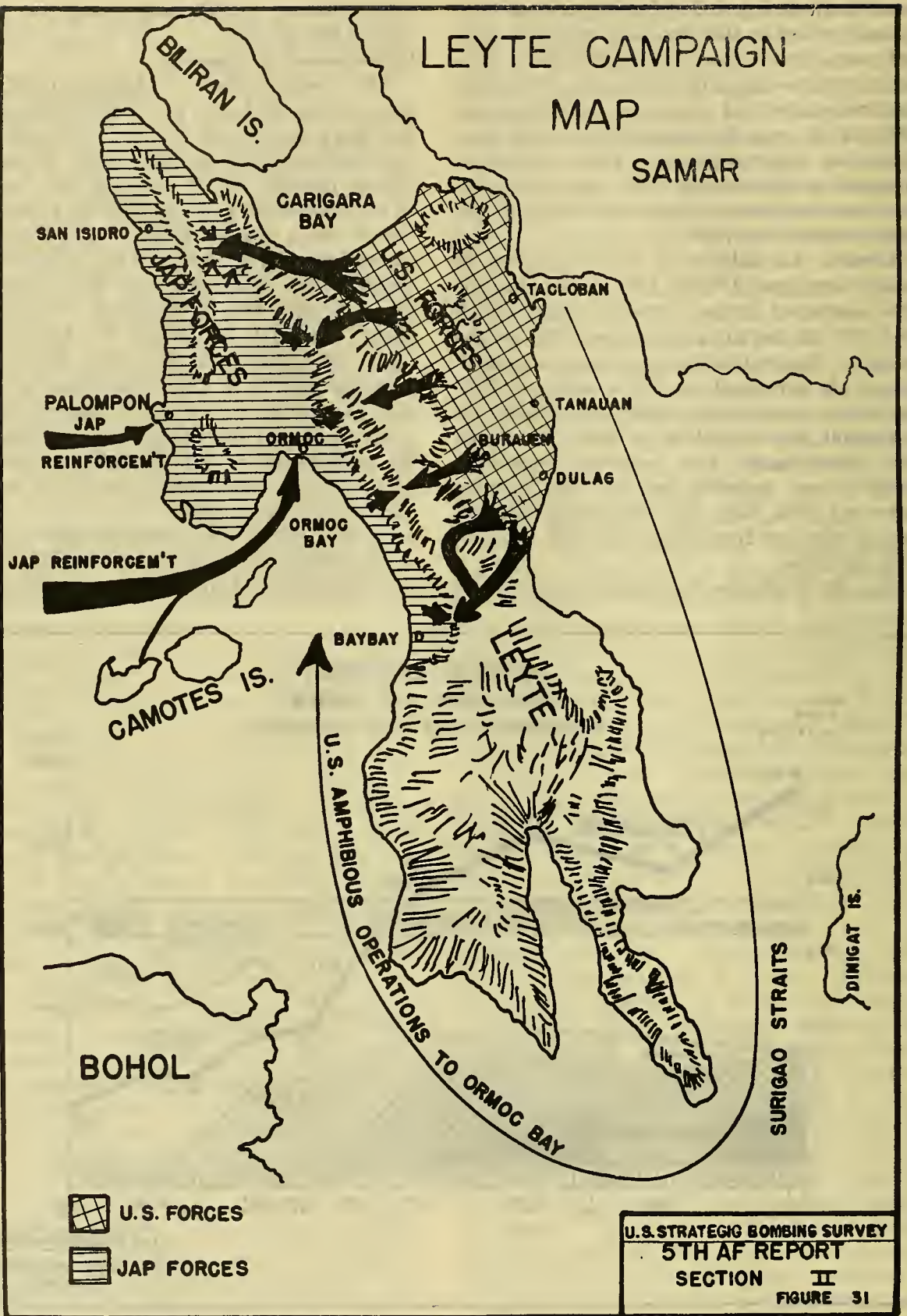
After establishment of American forces on the east side of Leyte, the enemy became more and more determined to fight a decisive battle for the Philippines, on that island. He held the Ormoc corridor which had the best weather at the season and tried desperately to reinforce Ormoc for a counter attack. Our troops had entered the North section of the corridor, were crossing the mountains, and were making a thrust to Bay Bay in the South. During this period the Fifth AF denied the Japanese the power of supply, and destroyed much of his shipping and more than two divisions before they could be landed. Some of these movements of troops were from Luzon where he weakened his local situation. An amphibious movement of American forces finally sealed the corridor and closed the campaign.

By 28 October some reinforcement had been accomplished by the Japanese. Opposition was not possible by United States air forces as



LEYTE CAMPAIGN MAP

SAMAR



U. S. FORCES



JAP FORCES

U. S. STRATEGIC BOMBING SURVEY

5TH AF REPORT

SECTION II

FIGURE 31

carrier forces had expended their maximum effort in defending themselves against air and surface attack 24, 25 and 26 October and Tacloban airdrome was not ready for land based air.

Following is a chronology of reinforcement convoys and the claimed results of attack as analyzed from American intelligence sources:

1/3 November. 7 large merchant vessels, 4 destroyers, 2 destroyers escorts plus a number of barges and landing craft.

Two merchant vessels were sunk, several others were damaged. This brought in the Japanese 1st Division.

9/10 November. 3 to 4 merchant vessels and 15 destroyers or destroyer escorts.

Three merchant vessels and 15 destroyers or destroyer escorts were sunk by P-38s and B-25s from Morotai. (The B-25s landed at Tacloban for fuel and returned to Morotai.) A large part of this destruction occurred after unloading but most of the supplies and some troops were destroyed on the beach. This was the Japanese 26th Division.

11 November. 4 merchant vessels, 5 destroyers and 1 destroyer escort.

Four merchant vessels and 4 destroyers were sunk by airplanes from the fast carrier force lying outside the bad weather, which had grounded Fifth AF.

14 November. 2 merchant vessels, 2 small freighters and 6 destroyers.

This landing was unopposed. Fifth AF grounded on account of weather. On the 17th the enemy began to employ small shipping from Cebu to effect further reinforcement. P-40 and P-38 sweeps soon after terminated this effort.

21 November. 1 merchant vessel (4,500 tons), 6 to 8 small freighters, 1 submarine chaser.

Three small freighters sunk.

24/25 7 merchant vessels with undetermined escort.

Five merchant vessels and 1 destroyer escort sunk.

28/29 November. 12 merchant vessels and 3 destroyer escorts.

The entire convoy was sunk.

7 December. 9 merchant vessels and 4 destroyer escorts with strong air cover.

At this time, American amphibious forces

were enroute to Ormoc covered by the Fifth AF. Their objective was to establish a beach head at Bay Bay to flank the enemy forces in the drive on Ormoc. At the same time enemy convoy No. 10 was on the way with reinforcement for Ormoc.

During the day this entire convoy was sunk, 70 enemy airplanes were shot down and our forces were safely landed.

12 December. 6 merchant vessels, 5 destroyers or destroyer escorts.

Five merchant vessels and 4 destroyers or destroyer escorts were sunk. This convoy was headed for Palompon and was attacked by the Fifth AF and its attached Marine Unit. It was the final effort of the enemy and on 26 December, GHQ announced the Leyte campaign closed. Mopping-up operations lasted another 30 days, during which all remaining Japanese were destroyed or captured. No evacuation of enemy forces was possible.

The number of airplanes the Fifth AF had available at Leyte is tabulated below.

	<i>Average available daily</i>
28 Oct-2 Nov	44
3 Nov-9 Nov	73
10 Nov-16 Nov	119
17 Nov-23 Nov	118
24 Nov-30 Nov	111
1 Dec-7 Dec	175
8 Dec-14 Dec	232
15 Dec-21 Dec	286
22 Dec-25 Dec	342

The cost of these operations to the enemy was: 50 transport and escort vessels, approximately 70,000 troops* and a substantial amount of supplies destroyed according to available United States intelligence. (From Japanese sources at least 32 transport and escort vessels have been confirmed.) The actual result of the air blockade was the assurance of our position in the Philippines.

* As previously stated, an unknown number of these troops got ashore, without equipment, at islands other than Leyte.

Air Entry Into Japan

On 15 August 1945, it was decided that immediate advantage must be taken of the Japanese surrender offer. Entry into Japan with available forces was a gamble as a million enemy troops were in the Tokyo area. Should a change of heart induce resistance on their part the results would be embarrassing.

This invasion had to be very rapid, for psychological as well as practical reasons. This meant air transport, and the task was divided into two phases. First:

Move the 11th Airborne Division from Luzon to Okinawa, Second:

Garrison Tokyo with:

- a. 11th Airborne Division.
- b. Eighth Army Headquarters.
- c. Advanced G.H.Q.
- d. Advanced F.E.A.F.
- e. 27th Division.
- f. Fifth AF Airdrome Operations.
- g. Resupply.

Garrison Kanoya with:

- a. 127th Infantry.
- b. 309th Bomb Wing.
- c. Air Freight Forwarding Units.
- d. 873rd Engineers.
- e. 8th Service Squadron.
- f. 5th Air Technical Intelligence Unit.
- g. 188th A.A.C.A.
- h. 1037th Signal Company.
- i. 1062nd Quartermaster Company.
- j. 2812th Engineer Petroleum Company.
- k. 307th Airdrome Squadron.
- l. 153rd Weather Squadron.

As a supplement to the second phase, American prisoners of war were to be evacuated. It was a large task and planning time was short. Fifth AF transport was augmented by 100 B-24s from the Fifth AF and the Thirteenth AF. The 11th Airborne Division, 11,300 personnel, plus impedimenta, were moved from Luzon to Okinawa in less than 72 hours in 651 plane loads.

Phase Two was the greater problem calling for first, garrison Tokyo; second, garrison Kanoya; third, furnish continuous resupply at Atsugi Airdrome from Iwo Jima; and fourth, evacuate prisoners to Luzon via Okinawa. One hundred sixty-four C-54s were loaned by Air Transport Command for the operation. They were flown in 15 serials per day at the rate of 7 planes per hour (around the clock) until completion of the mission. Interspersed in these schedules, 46 C-46s from Iwo Jima kept Atsugi restocked with fuel, rations and were ready if necessary to supply munitions. Ninety-five C-46s and C-47s supplied Kanoya. Fifty-six B-24s shuttled prisoners of war from Okinawa to Luzon.

The operation began 29 August and was completed as planned on 13 September, except for continued resupply.

Although planned on short notice, this was among the most important air movements of the war in scope and importance. The rapid deployment and maintenance of armed forces by air had been a task indigenous to the Theater since the Battle for Buna and the development to its ultimate refinement was accompanied by plans for greater expansion. The next phase, should the need have arisen, was the transport of complete air base units, and Army corps.

EXAMPLES OF ACTION WITH THEATRE IMPORTANCE

Cape Gloucester

The capture of Lae in September 1943 gave us bases for the control of the waters of the southeast coast of New Guinea. The Japanese had developed an intricate barge system of supply from New Britain to Umboi Island to New Guinea. In order to close this last effort and have complete control of Dampier and Vitiaz Straits it was necessary to control Western New Britain. Cape Gloucester airdrome seemed to be adequate to base fighters in support of troops and air barge-hunters. Most of the Japanese strength was at Cape Gloucester proper, with sizeable units at Borgen Bay, El Bay and Rein Bay—all cognizant of our intentions. A landing was planned for Borgen Bay and Tauili. Preparation for invasion called for prolonged bombardment of a large area in order to cover all enemy concentration and installations.

The date of landing was to be 26 December 1943 and preparatory air attacks were begun on 19 November, and continued 38 days to the invasion. All installations were saturated. Some 1845 sorties were flown and 3926 tons of bombs were dropped in preinvasion strikes. The result was the elimination of resistance against our assault and negligible retaliation after our troops were established. Supplies and munitions were destroyed to the point that some troops charged our lines unarmed. The success of the ground troops and the limitation of casualties demonstrated the ability of prolonged bombardment to nullify determined resistance.

CAPE GLOUCESTER SITUATION MAP



Preparatory Strikes on Cape Gloucester Area

[19 Nov - 25 Dec 43]

Date	Number and type of A/C				Target	Number and weight of bombs					
	A-20	B-25	B-26	B-24		100	250	300	500	1,000	2,000
19 Nov		9			Barge sweep		59				
22 Nov				22	Gloucester dumps	456				64	
24 Nov				1	Cape Raoult, A/A posns					2	
29 Nov		28	9	1	Gloucester dumps			242	72	2	
30 Nov		8			Barge sweep			26			
				15	Gloucester dumps	600					
1 Dec		29	7		Borgen Bay area				216		
	14				Borgen Bay, Barge sweep			46			
2 Dec		25			Borgen Bay area			164			
		35			do			257			
3 Dec		29	7		Gloucester dumps				156		
				17	Gloucester dumps & A/A					130	
				25	do					177	
4 Dec	7				Kokopo; barge sweep			16			
		6			Rein Bay to Iboki Ptn			41			
		24			do			170			
				10	Gloucester A/D & Rein Bay					66	
5 Dec				15	Gloucester A/A posns					118	
				27	Gloucester dumps					216	
6 Dec				20	Dorf Pt. Area					146	
				24	Ulamaingi Village					191	
		24			Borgen Bay area			143			
		6			do			36			
7 Dec				18	Gloucester A/A posns			240		62	
				26	do			312		96	
		27			Kokopo area			176			
		24			Borgen Bay area			144			
9 Dec		23			Cape Raoult-Rein Bay			152			
		27			Borgen Bay area			189			
				1	Gloucester A/D					2	
10 Dec				14	Gloucester dumps					106	
11 Dec		26			Borgen Bay area			165			
12 Dec		1			Gloucester bivouacs	12					
				1	do					2	
13 Dec		1			Gloucester bivouacs						
				2	do					4	
15 Dec				13	Gloucester dumps					73	
				23	Gloucester A/D, etc.					23	68
				19	do					144	
16 Dec				18	Ulamaingi area					101	
				20	do					136	
17 Dec		10			Target Hill			45			
				6	Dorf Pt. area					36	
				22	Gloucester A/A posns						80
18 Dec				25	Gloucester A/D					198	
		33	12		Gloucester dumps				264		
		24			Borgen Bay area			162			
				20	Cape Hoskins A/D					160	
				17	do					102	
19 Dec				39	Gloucester A/D					274	
				36	Gloucester A/D, dumps					216	
		22	9		Gloucester dumps				174		
		24			Dorf Pt. area			172			
20 Dec		8		25	Target Hill					192	
					Sag Sag				31		
	12				Aisega		41				
				23	Silimati Pt.					176	
				18	do					93	
				16	Gloucester A/D					90	
		24			Borgen Bay area			176			
21 Dec	25				Sag Sag		42		44		
		10			Ulamaingi			60			
				35	Gloucester A/D				378	18	
				19	do				192	24	
		24			Target Hill					80	
22 Dec				32	Gloucester dumps					384	
	46	9			Borgen Bay area	82	43			122	
				18	Gloucester dumps					216	
				26	do					287	

Preparatory Strikes on Cape Gloucester Area—Continued

[19 Nov - 25 Dec 43]

Date	Number and type of A/C				Target	Number and weight of bombs					
	A-20	B-25	B-26	B-24		100	250	300	500	1,000	2,000
23 Dec				18	Borgen Bay area				216		
				24	do				288		
				18	do				216		
24 Dec	40	12			Barge sweep			77			
		9			Tauali area	92	107		31		
				36	Borgen Bay area				427		
		12	7		Sag Sag area				109		
		26			Borgen Bay area				101		
				48	do				576		
25 Dec	38			18	do				216		
					18	Tauali area	66	104			
		37			Borgen Bay area				216		
					Gloucester, Borgen Bay			246			
				20	Borgen Bay area				229		
		12	8		do				77		
		24			do			157			
			23	do				276			

Summary

Number of sorties	Bombs dropped			Rounds of ammunition
	Type	No.	Tons	
A-20, 182	<i>Pounds</i> 100	1,308	65.4	.30 cal., 142,660
B-25, 672	250	396	49.5	.50 cal., 952,828
B-26, 59	300	3,614	542.1	75mm, 1,253
B-24, 932	500	5,594	1,398.5	20mm, 75
	1,000	3,440	1,720.0	
	2,000	148	148.0	

Total sorties 1845. Total tonnage 3926.0.

A. Bomber Operations

Number of planes	Type	Target	Number and weight of bombs					Ammunition	
			100	250	300	500	1,000	.30 Cal.	.50 Cal.
9	B-24	Target Hill				12	56		
10	B-24	do					64		
9	B-24	Silimati Pt. defenses		108					
8	B-24	do				84			
7	B-24	do		84					
10	B-25	Yellow Beaches	204						18,100
10	B-25	Target Hill	100					5,300	14,885
8	B-25	Yellow Beaches	176						13,780
10	B-25	do	220					2,700	22,315
11	B-25	Green Beach, Tauali	120						22,500
8	A-20	Target Ridge		30					12,400
12	A-20	do		41					10,650
12	A-20	do		45					8,745
6	B-24	do					36		
6	B-24	do					36		
6	B-24	do					36		
6	B-24	do					36		
9	B-25	Ulamaingi Village Area					14	400	4,400
9	B-25	do					17	450	4,900
9	B-25	Potni Village Area					18	850	12,275
9	B-25	do					16	1,030	12,670
6	B-25	Natamo Point defenses				24			5,250
6	B-25	do				16		1,100	5,775
6	B-25	do				30			4,800
6	B-25	do			24				5,645
6	B-24	Hill 660					36		
6	B-24	do					36		
9	B-24	do					54		
9	B-24	Target Ridge					62		
10	B-24	do					72		
Totals { 107 B-24 109 B-25 32 A-20 }			820	308	24	166	589	11,830	179,090

Total bomb tonnage: 419.1.

In addition fighter sorties and results follow:

Totals:

No. of Planes	Victories		U. S. Losses Destroyed Missing
	Destroyed	Probables	
112 P-38	63	5	5
36 P-39			
31 P-40			
117 P-47			

296

Allied anti-aircraft fire also shot down one enemy fighter, the 499th Bombardment Sq. claims 1 Val shot down, and the 501st Bombardment Sq. claims 1 Val probable, raising the totals given above to 65 destroyed and 9 probably destroyed. Comparison of personnel losses is interesting: The Japanese lost a minimum of 142 air men, a maximum of 188. The Fifth AF lost 2 pilots from enemy action.

Capture of Corregidor

Corregidor commanded the entrance to Manila Bay. Manila was needed as a major

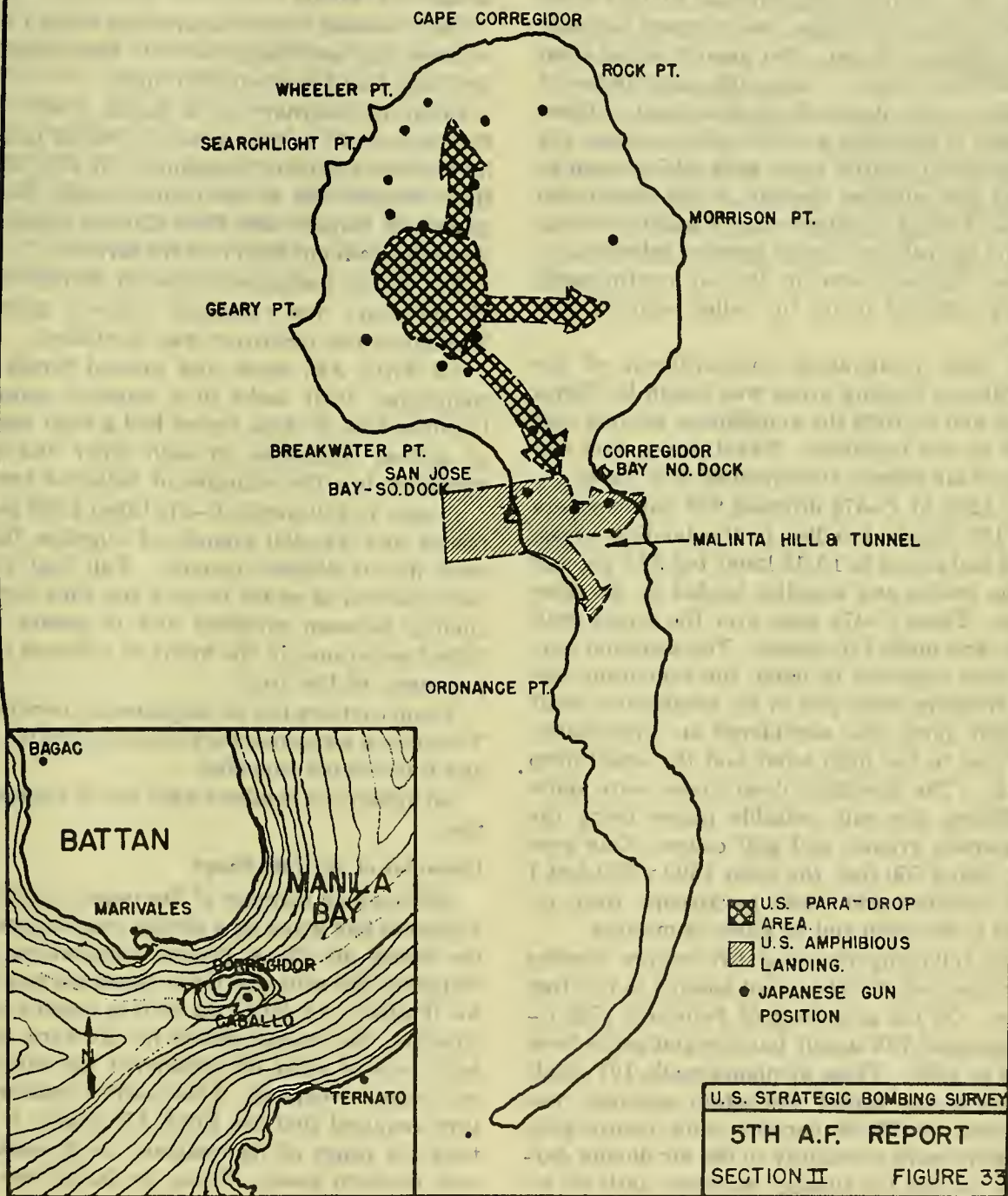
supply base without delay and Corregidor had to be taken. This fortress was strongly fortified against seaborne attacks. Its garrison anticipated and prepared for such a threat. A decision was made to capture it by air assault, and February 16 was designated "D-day."

The operation was executed as planned. At 0759 24 B-24s left the target after securing good coverage from their bombs. Eleven B-25s followed them and from 0800 to 0829, bombed and strafed AAA positions and strong points on the southern coast. Simultaneously with this attack 31 A-20s bombed and strafed defense positions on Corregidor and nearby Caballo Island. Direct hits and near misses were registered on these positions and all targets were thoroughly strafed. When the A-20s left the target at 0829, they had brought the weight of bombardment of this target to 3,128 tons since beginning of preparatory attacks on 23 January.

At 0830 the lead plane of the troop carrier group passed over the drop zone on the western

CORREGIDOR

U.S. PLAN OF OPERATIONS



side of the island. Passing at 300 feet no enemy activity was noted. At this time one battalion of infantry departed Marivales for San Jose Bay in 35 Army LCMs. Immediately after C-47s of the first two flights began the paraprop, the men being jumped in "sticks of eight."

Wind had arisen to 12 knots so the jump line was changed at the last minute and the altitude was lowered to 500 feet above the terrain. On the first drop mission 51 C-47s released 1,021 paratroops, one support aircraft party officer, and two joint assault signal communications officers. Some 151 parabundles of supplies were dropped at this time. These transports departed at 0932 after making 174 passes over the drop zones with 92.5 percent of troops and supplies landing in the designated areas. Twelve Fighters and 34 A-20's were in the air for call on ground support missions.

Four fighters were in the air continuously during daylight hours for called support missions.

At 0930 preinvasion bombardment of the amphibious landing areas was begun by Naval Units, and at 1028 the amphibious landing was made by one battalion. Naval fire control and support air officers accompanied this force.

At 1230 51 C-47s dropped 979 paratroopers and 159 supply bundles in the landing areas. Wind had arisen to 16/18 knots but 92.7 percent of the troops and supplies landed in the drop areas. These C-47s were over the target until 1400; and made 170 passes. The situation having been reported in hand, the remaining 889 paratroopers were put in by amphibious craft as their jump was considered an unnecessary risk due to the high wind and the small drop areas. (The available drop areas were quite restricted, the only suitable places being the old parade ground and golf course. One zone was 1500 x 750 feet, the other 1500 x 250 feet.) Two hundred and three paratroops were injured in the drop and 19 killed or missing.

The following morning 197 supply bundles were dropped, 95/98 percent landing in the drop zones. On the afternoon of February 17th C-47s dropped 785 supply bundles and packs from 1410 to 1630. These airplanes made 191 single passes at the target and again accuracy was excellent as 95/98 percent were recoverable. Fighters were constantly in the air during daylight, on call for support missions until all re-

sistance had ceased on 23 February. "Mopping up" had taken another 13 days.

The final result was that 4,560 American troops had captured the fortress from nearly 6000 Japanese. Our casualties were 210 killed and 985 wounded or injured in action. Naval casualties were 34 killed, 109 wounded and 7 missing, with unreported casualties from 3 LCLs destroyed in night attacks by enemy suicide "Q" boats.

The wounded were evacuated by Navy LST's to Subic Bay and thence flown to base hospitals by Troop Carrier evacuation units.

From 16 February to 3 March P-47s and P-51s flew 407 sorties against ground targets in requested support missions. In this effort they dropped 466 x 500 pound bombs, 55,500 gallons of Napalm and fired 320,000 rounds of .50 caliber ammunition into the targets.

Two Navy destroyers were on station until 27 February for requested support gunfire. Thereafter one destroyer was on station.

All Fifth AF, naval and ground forces accomplished their tasks in a superior manner. Commanders of these forces had a high degree of mutual confidence in each other and this operation is a fine example of balanced forces.

Loads: In 189 sorties C-47s lifted 2,908 paratroops and 243,450 pounds of supplies for a total lift of 855,900 pounds. Full fuel loads were carried in order to save the time for refueling between missions and to insure sufficient endurance in the event of a forced postponement of the drop.

Troop carriers lost no airplanes or personnel. Twenty-six airplanes were holed by ground fire and 6 personnel wounded.

No fighters or bombers were lost in the operation.

Extension of Aircraft Range

Although an increase of fire power on strafing airplanes had given us a strong weapon against the enemy air strips, ground installations and shipping, the range of these airplanes was still too limited. As Allied air strikes became more effective, the enemy pulled his forward bases back beyond what he considered the range of our longest weapons. This counter measure in turn required that the Fifth AF either; 1. Extend the range of its weapons; or 2. establish new forward bases. Since the latter was not

always possible, due to the lack of amphibious lift, the former or the constant drive to extend aircraft range was given even greater impetus. From a very early period in the war, all divisions of air planning were devoted to this problem. Increased range afforded the element of surprise and could catch the enemy when and where he felt secure.

Additional gasoline tanks, installed on the B-25s eventually gave them a radius of 720 to 750 nautical miles. Fighter range was extended to over 700 nautical miles, heavy bomber formations flew missions of 860 to 1,020 nautical miles, and night bomber and reconnaissance continually flew 14 and 16 hour missions. It became possible at selected intervals to provide fighter escorted strikes at distances great enough to penetrate the zones where the enemy felt secure from such attacks. These changes required the use of available Australian ma-

terials and had to be accomplished before the arrival of new equipment to the theatre. The burden fell on the depots for field modification. As they were not organized to accomplish this type of work, it greatly handicapped normal maintenance. Long range forces were obviously never large as it was impossible to effect these modifications on a scale which would equip a major part of the Air Force at any one time. Results were effective, however, and this rapid adjustment of weapons to the enemy and the geography was of enormous significance in Fifth AF operations.

Outstanding examples of exploitation of this increased reach were (a) fighter escort to heavy raids on Balikpapan from Noemfoor and Morotai, (b) fighter cover for B-24s to Singapore from Palawan and (c) fighter cover for shipping strikes to the Indo China coast from Luzon.

SECTION VI
OPERATIONAL AND TECHNICAL FACTORS
OF IMPORTANCE

GROUND SUPPORT

In all its phases, ground support was greatly stressed in the Southwest Pacific Area. Enemy defenders killed and installations destroyed insured our ground troops against heavy losses. To quote General Whitehead, "The objective in war is to kill the enemy and destroy his equipment." The Fifth AF followed out the objective throughout this war. All types of airplanes were used to accomplish this end. When the general situation permitted attack-bombers to obtain surprise, these airplanes carrying para-frags or para-demos, in addition to their great strafing power, were by far the most effective weapon for the destruction of any target on land or sea. An indication of the effectiveness of support aviation in the Southwest Pacific Area is apparent in the low casualty figures on each of the invasion operations from Cape Gloucester to the Philippines.

Aircraft

The first essential factor in the development of ground support was aircraft adaptability. In the early phases of the Southwest Pacific the available United States airplanes did not develop their full potential of forward fire power, nor were they equipped to carry the various types of bombs that were available. The first type to be developed primarily to carry out low altitude missions was the A-20. Its four .30 cal. forward guns were replaced by four .50 cal. forward guns and special racks were fabricated to handle fragmentation bomb. Later factory models of the A-20 were equipped with the special gun nose and frag racks.

Early models of the B-25 were equipped with a single flexible .30 cal. gun in the nose. Experimentation in the Third Bomb Group resulted in the installation of eight fixed forward guns. The gun nose B-25 was later made a standard production model in home factories. The A-26 with its gun nose and fixed wing guns was the ultimate in forward fire for low altitude work. The B-25 equipped with 75 mm cannon was tried in the Fifth AF in 1943 and 1944. However, the cannon was discarded in favor of additional .50 cal's high cyclic rate, during the rapid closure with the target in low altitude attacks.

Heavy forward fire power in fighters was early developed as standard in the United States. Little modification was attempted to

improve fighters in their close support roles—except to improvise bomb racks in early models.

Bombs and Fuses

The early standard bombs and fuses would not lend themselves to employment of the low altitude tactics, standard in the Southwest Pacific. To meet the requirements for low altitude attacks many special bomb and fuse modifications were accomplished.

The fire bomb early established itself as a primary weapon against the Jap. The magnesium incendiary did not meet requirements so other bombs were improvised locally. The first improvised fire bomb attacks were accomplished by dropping belly tanks, partially filled with gasoline, which broke on impact spraying the surrounding area, and then by firing into the impact area with incendiary bullets and igniting the gasoline. The disadvantage of the second pass to ignite the gasoline was overcome by attaching a magnesium bomb to the tank which burst into flames and ignited the gasoline on impact. Further development produced an impact fuse that screwed into the gas tank in place of the normal cover. The next improvisation in fire bombs was made by filling practice bombs first with gasoline and later with gasoline mixtures that burst on impact scattering a flame of gasoline, oil and rubber over wide areas. This type of bomb later became standard with the development of the various Napalm types used against Japan.

Napalm became a primary weapon in close support in the Southwest Pacific as soon as it became available in quantity late in the war. In the Ipo Dam area, west of Manila, the Japanese were holed up in five strongholds embracing almost a square mile of area. Five fighter groups delivered a total of 646 sorties dropping 200,000 gallons of Napalm to enable our ground troops to walk, standing up, into the enemy strong points where weeks of probing prior to the fire bomb attacks had failed to show a soft spot.

The dispersal effect of small 23 lb. fragmentation bombs against jungle targets was early recognized. The added advantage of small para-frags with delay fall for low altitude attack made the fragmentation bombs high priority for procurement in the Pacific. Shortage of standard para-frags led to the development of the 100 lb. para-frag bomb utilizing

the standard para-frag chute attached to a standard 100 lb. demolition bomb. Attempts to use large bombs with parachutes attached were unsuccessful because of strain that the chute fabric was incapable of withstanding.

A precision delay action fuse development was utilized against the Japanese in a most demoralizing manner in the jungle behind Salamaua. The fuse was time set to be dropped from a fixed altitude for an explosion from 25 to 50 ft above ground. Even though there was a high margin of failures the effect of the number that worked was found most gratifying by the Australian land forces.

The development of standard bombs and fuses kept up with theater demands once the requirements were fixed and except for shortages in special types the over-all supply kept up with theater requisitions.

Tactics

The shortage of specialized aircraft due to the relative priority of the Pacific war forced the development of tactics to permit all types of aircraft to carry out any required mission.

The coordinated attack utilized medium or high altitude bombers initially to beat down anti-aircraft and thus to cover the approach of strafers which were assigned pin point targets. This proved most effective. Further development of coordinating low altitude attack, with leading units assigned to neutralize enemy defenses and to screen following units attacking primary targets made this method a favored means of attack against the Japanese.

Amphibious landings in the Southwest Pacific required the early development of a technique for beach head neutralization. Ground support for our troops was commenced long before an invasion started in the isolation of the landing area, neutralizing enemy air forces in range of the invasion area and preventing reinforcement. Attack on the enemy garrison was always heavy enough to enable our troops to land and secure the beachhead before being attacked. Initially on a new operation, photos of selected beachheads were searched and prepared defenses pin-pointed. Once the targets to be knocked out had been selected and analyzed sufficient bomb tonnage was put into the target to destroy the defenses. This preparation was timed to "D-Day" so that the enemy could not improve his defensive position.

Cape Gloucester and Corregidor are examples of Fifth AF invasion preparations. Cape Gloucester was defended over a wide area and the prepared defenses of Corregidor were the strongest in the Pacific. Negligible ground losses were suffered in either operation.

At a selected date prior to the landing the enemy avenues of approach to the landing areas were interdicted to prevent any reinforcements gaining the beachhead area. The interdiction of the enemy lines of communication in Luzon was an excellent example of planned isolation of beachhead areas.

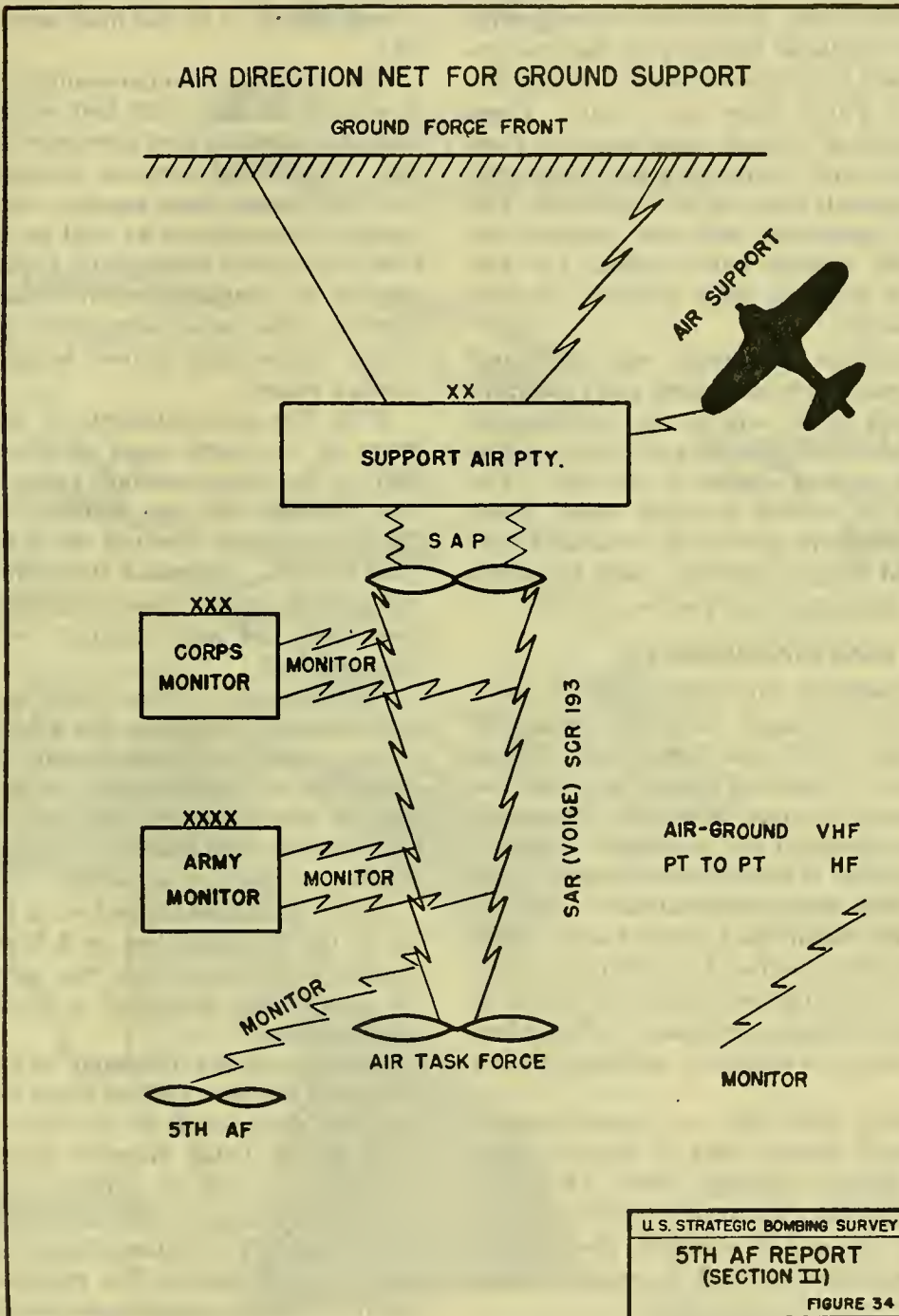
To insure that all enemy opposition was beaten down prior to the final amphibious assault, the timing of H-Hour was usually so fixed to allow coordinated low altitude attacks at the beachheads, with additional aircraft on air alert over the landing for call at any time of day on requested support. Ground commanders are sincere in their praise for the Fifth AF beachhead preparation. Although our troops came ashore ready for action, almost 80 separate landings in the Southwest Pacific Theater were accomplished with comparatively negligible losses.

The dive bomber was not considered an economical weapon by the Fifth AF and was early discarded for the fighter-bomber, which was also a low-altitude strafe and skip-bomber. It proved to be an all-purpose weapon. Mountainous terrain in New Guinea and the Philippines often dictated dive bomb tactics while attacks on pinpoint close support targets designated by support air parties were normally dive bombed. This technique was developed to the extent that our own ground troops in some cases called for and received effective attacks within 100 yards of their forward positions.

High altitude bombing was infrequently but effectively used, against strong area targets requiring neutralization. High and medium altitude attacks were used against specialized targets but only after detailed briefing of participating crews.

Communications

The requirement for greatest speed in receiving the calls for close support by combat air units was obvious. During the Buna campaign the ground requests were forwarded over Army command nets which was cumbersome. To insure adequate description of targets in the close



support requests, pilots from combat units were sent into the front line to act as observers and to assist in preparing requests. In addition ground force personnel were detailed to air combat units to brief and explain the ground situation to the pilots. As communication equipment became available the support net was established apart from the command nets and the Support Air Party came into being. These SAPs consisted of officers experienced in close support work and communications personnel assigned to assault units for the operation. The SAP stayed constantly with the forward elements of the ground units, calling for and directing air units in their delivery of close support missions.

Communications equipment was developed from the heavy transmitters and receivers available early in the war to the mobile radio jeep equipped for air-ground and point to point work in the moving stages of the war. The development of strong compact shock proof equipment, moisture proofed to withstand jungle rains and fungus growths, made the effectiveness of the support air parties possible.

RECONNAISSANCE

In the advance of our forces along the New Guinea-Philippine-Japan axis, the reconnaissance provided by the air forces was of inestimable value. Faced and flanked by a vast sea area impossible to cover by surface or submarine reconnaissance, it was necessary to expand tremendous effort in aerial reconnaissance. The Fifth AF long range reconnaissance was coordinated with that of the Central Pacific forces on the right flank, and the Australian air forces on the left. Covering the central position of an actively dangerous area, constant vigilance had to be kept over all avenues of approach within range.

Concurrently with the sea reconnaissance, whose primary purpose was to detect, report and attack enemy shipping, Fifth AF reconnaissance provided the current information on enemy airdromes and air strength, photographs of enemy positions, as well as mapping photography.

Initially, limited and intermittent reconnaissance from Australia and Moresby bases covered the Coral and Solomon seas as well as the immediate approaches to Australia. Low

strength of available airplanes did not permit complete and regular coverage of all possible danger areas. Reconnaissance was shifted on a day-to-day basis to cover those areas which seemed, from current intelligence and trends of enemy action, to be the most sensitive (Figure 35).

Heavy bomber reconnaissance operating from Townsville in May 1942 first reported the position of a Japanese fleet movement into the Coral Sea. Insufficient airplane strength prevented the Air Forces from keeping the force under constant surveillance as well as attack, therefore, contact was temporarily abandoned during periods of preparation for attack. Contact, however, was never completely lost until the enemy forces had retired beyond our heavy bomber range.

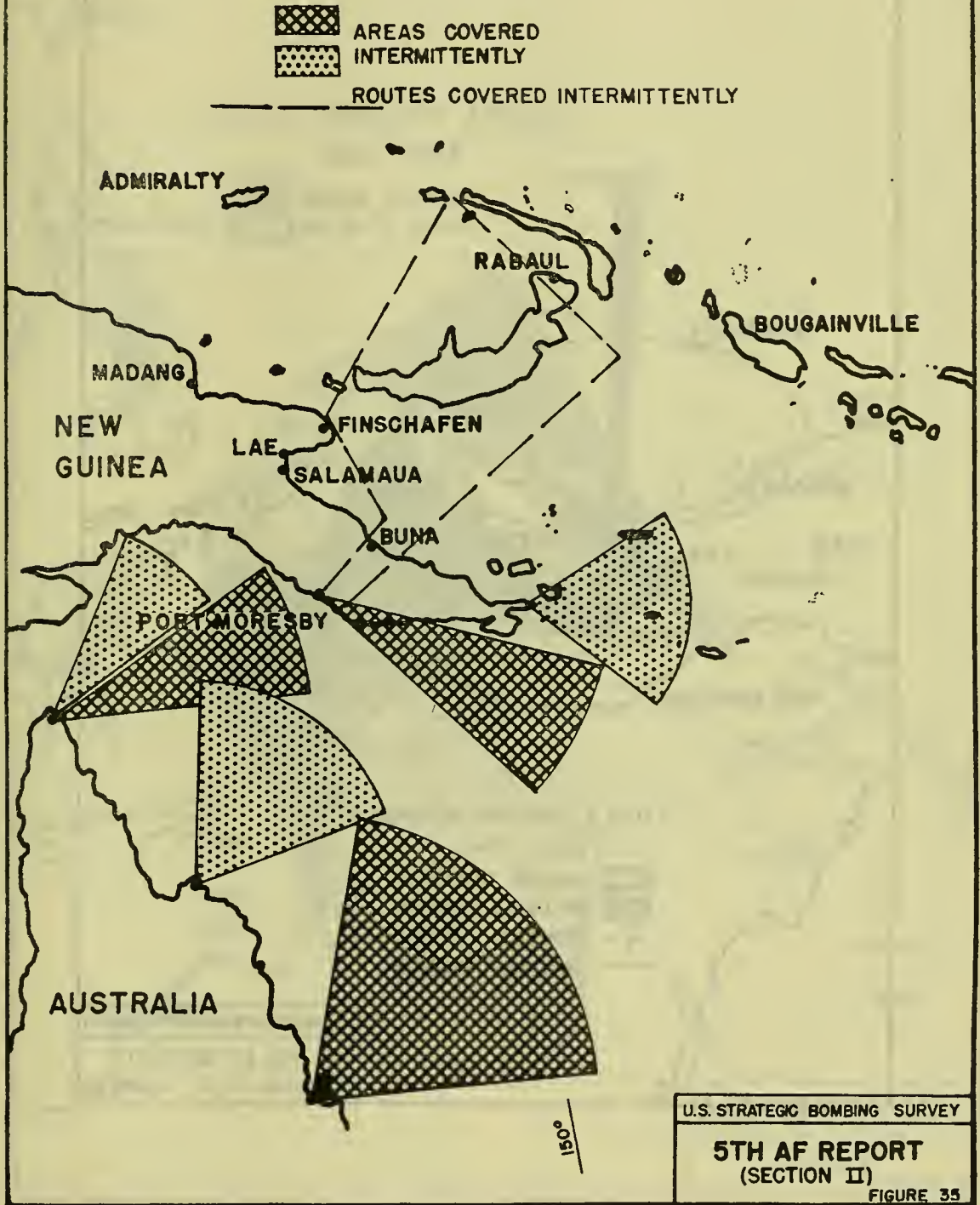
With the establishment of heavy bomber bases on the north coast of New Guinea, the limit of the reconnaissance range of our forces was extended over the Bismarck Sea and into the Pacific Ocean north of the Admiralties and New Guinea. Increased strength now permitted a more comprehensive search plan to be developed and more regular coverage to be accomplished.

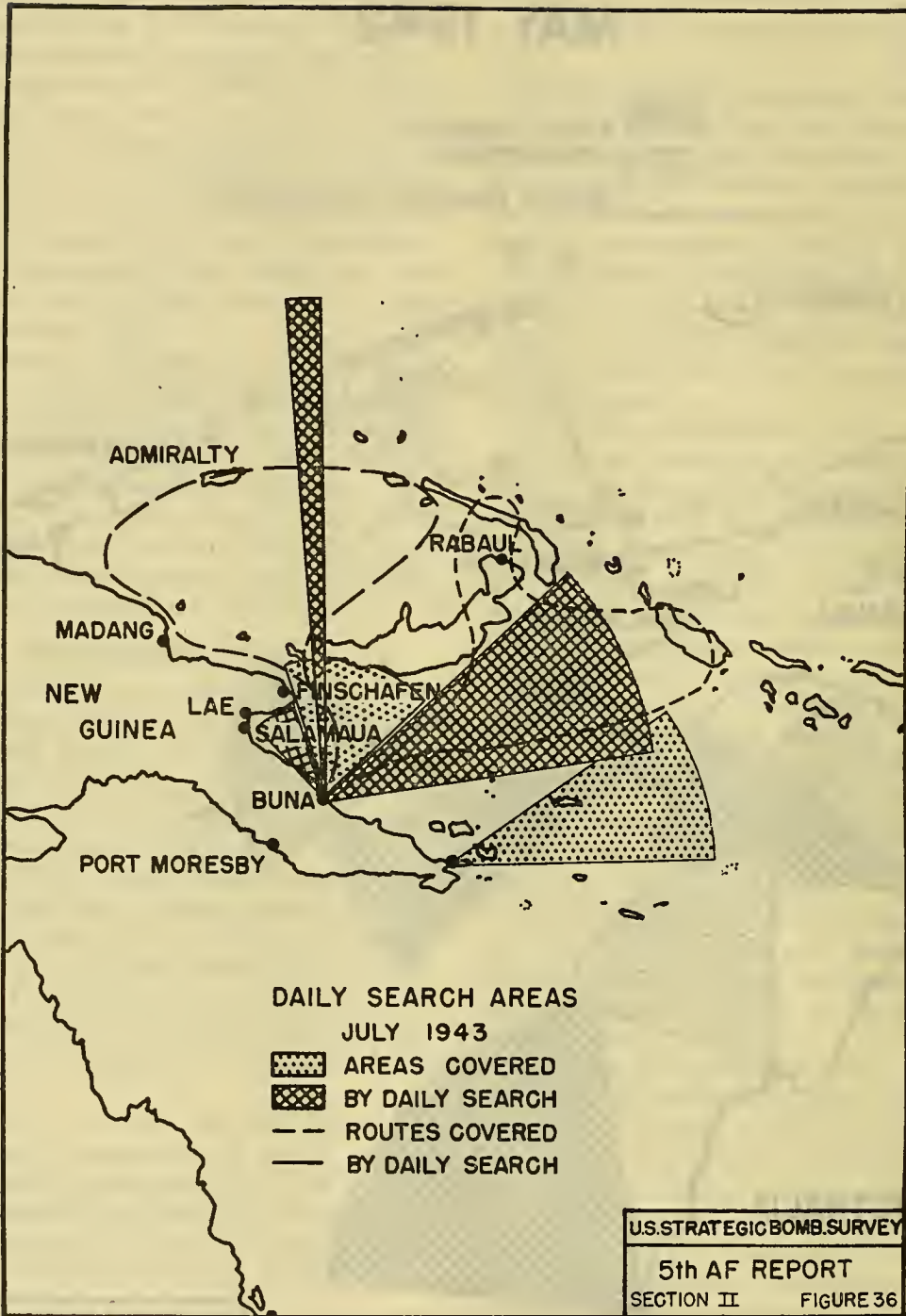
The pattern of establishing a coordinated reconnaissance coverage was a part of all operational planning. In intertheater planning consideration was always given to the relation of the air reconnaissance of each theater, and adjustments were made to insure complete and regular coverage of sea areas.

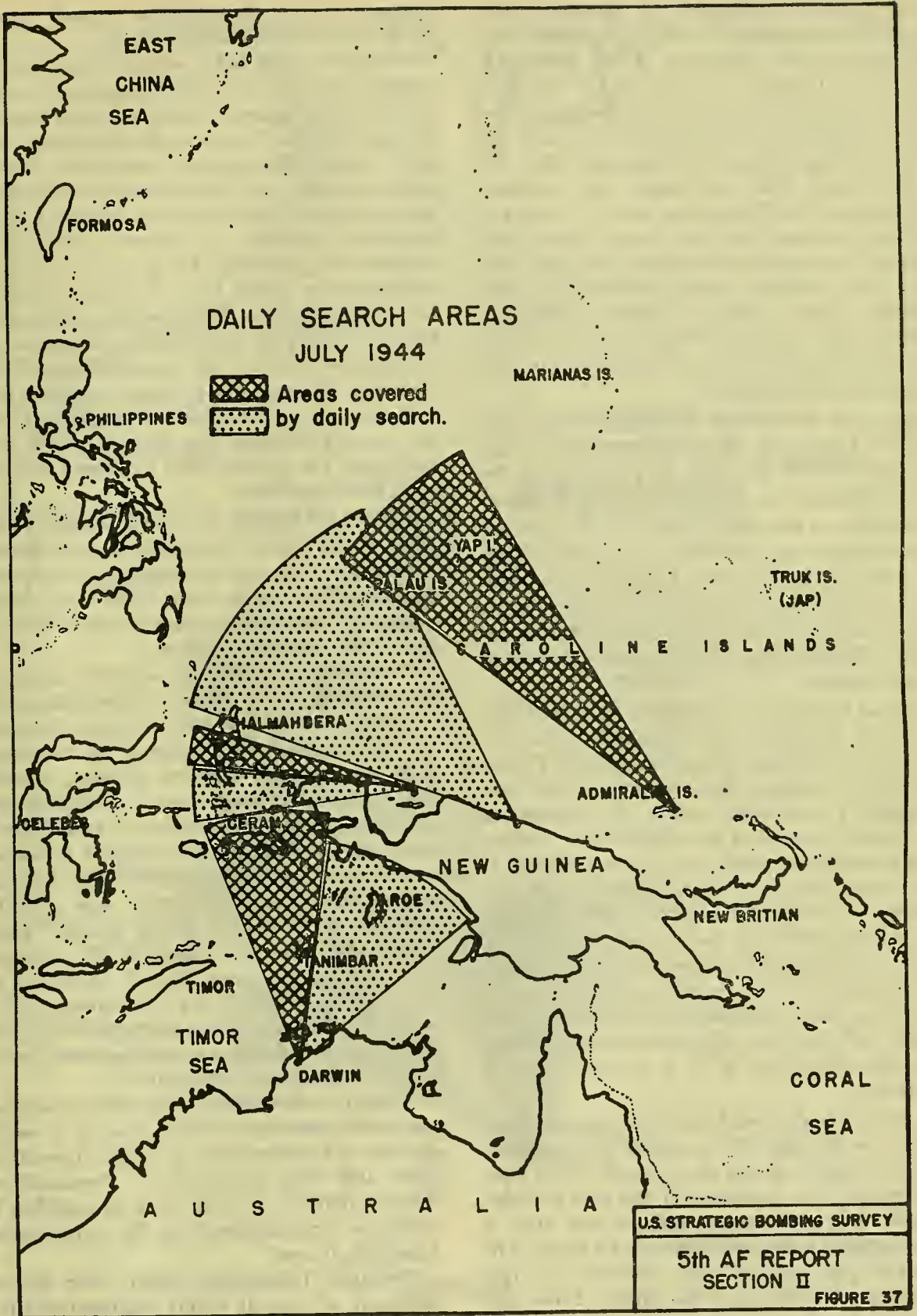
Alert reconnaissance picked up a convoy moving in the Bismarck Sea on 1 March 1943 and contact with this convoy was never lost until the convoy was destroyed in the battle of the Bismarck Sea.

Discovery of the movement of an enemy convoy along the New Guinea coast resulted in the complete destruction of the convoy of 5 ships on 19 March 1944. Regular sightings, by day and night, of enemy surface and submarine movements along the coast of New Ireland, New Britain, and New Guinea into and out of Rabaul and in the Bismarck Sea resulted in regular sinkings of Japanese shipping until shipping no longer moved in this area. Standard operating procedure provided for reports to be passed immediately to naval commands whose submarines used this information most effectively.

SCHEMATIC SEARCH AREAS MAY 1942







U.S. STRATEGIC BOMBING SURVEY

5th AF REPORT
 SECTION II

FIGURE 37

By successive advances the reconnaissance coverage was extended to the Philippines. Day and night search airplanes of the Fifth AF, assisted by Catalinas of the RAAF and Venturas and United States Navy B-24s, ranged the Pacific Ocean areas within 800 miles of our bases, the Halmaheras, Celebes, and NEI. By 15 September 1944 the eastern and southern approaches to the Philippines were covered and searches extended into the South China Sea, mapping and target photography missions were being flown, weather reconnaissance was penetrating tropical fronts to obtain Philippine weather data, and radar bombers were searching out and destroying enemy shipping in harbors and in open waters.

By April 1945, with long range airplanes based in Luzon, the Fifth AF was penetrating the East China Sea and overlapping in the Pacific the searches from Central Pacific bases.

Throughout the war, weather reconnaissance provided the only information available beyond the limited range of forward weather observers. This was of vital importance when it is considered that weather was one of the greatest factors affecting the operation and the security of our forces.

Special reccos to obtain special vital information were employed with outstanding success. Prior to the landing of the South Pacific Forces at Empress Augusta Bay, the enemy had concentrated a large air force in the Bismarcks; the buildup at Rabaul was observed in regular reconnaissance of that area—then suddenly it was noted that the strength of that base was depleted to a marked degree. The disappearance of a major portion of the enemy air force was cause for alarm and a special reconnaissance of Bougainville was ordered to determine if that area, the objective of the next Allied advance, had enjoyed a corresponding buildup. The significance of such a move is readily apparent.

A B-17 was ordered from Milne Bay to reconnoiter the Bougainville area and to bring back the information on its air strength at all cost. The mission was completed in the face of interception by 20-40 enemy fighters and after a running fight which lasted nearly an hour. The airplane was shot up badly and all the crew wounded or killed—but the enemy force was

located and this information passed immediately to the South Pacific Forces.

Development of radar search techniques during late 1942 and early 1943 expanded the effectiveness of air search. Security which darkness and bad weather formerly afforded enemy shipping moves was no longer provided. Regular night searches now supplemented day searches whose coverage now extended through areas of restricted visibility. In October 1943 the assignment to the Fifth AF of a unit especially equipped for radar blind bombing from low altitudes as well as radar search added an offensive feature to the normally defensive and intelligence function of reconnaissance. The air scout was now able to attack and destroy as well as report and shadow. The Fifth AF combat records indicate that this squadron alone accounted for 361,425 tons of enemy shipping sunk during the war.

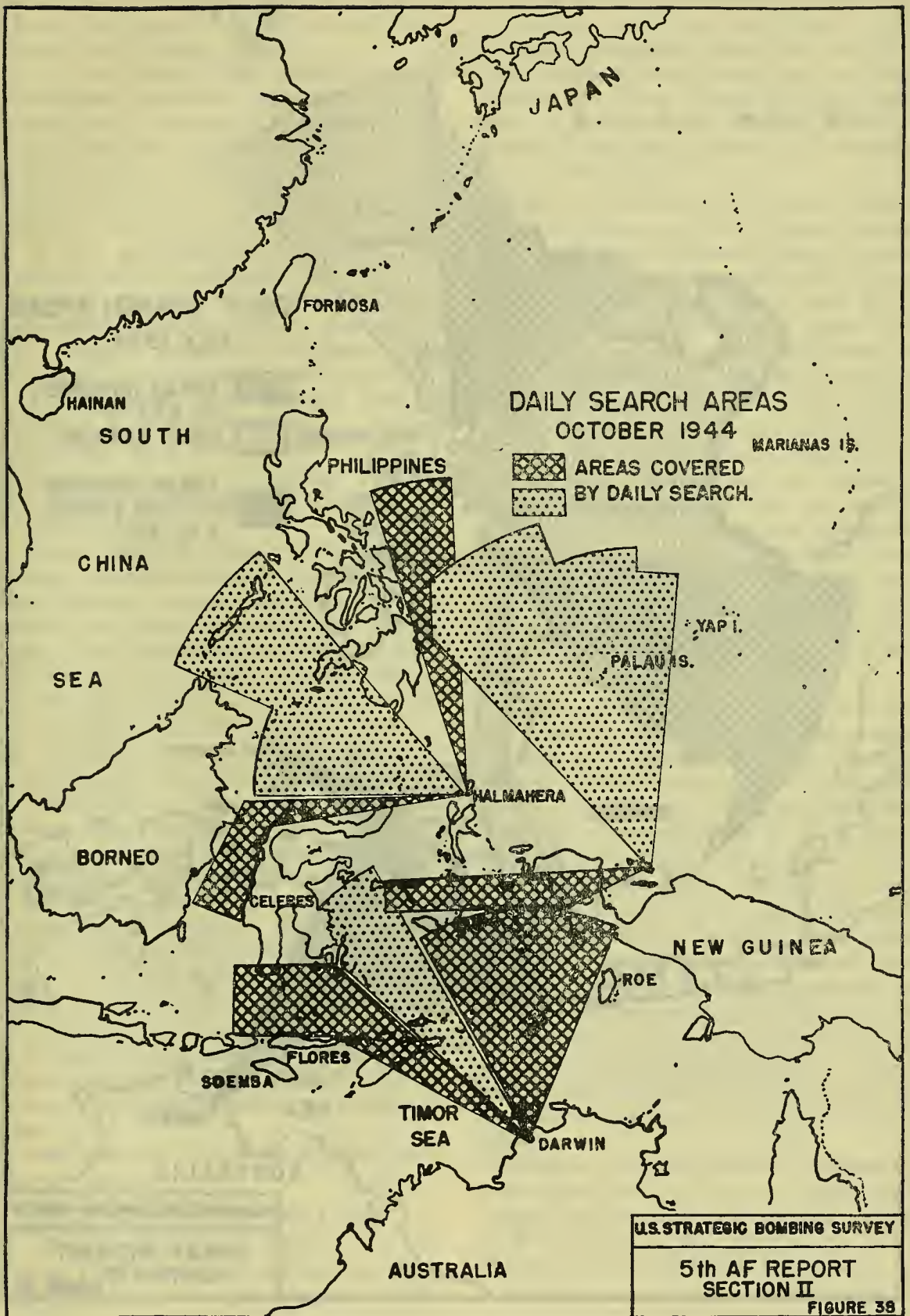
DEVELOPMENT OF INTELLIGENCE

Up to the end of May 1942, Intelligence personnel were few and equipment was scarce in the Southwest Pacific Area. The most reliable sources of information were "Central Bureau" and "Coast Watcher Service."

The latter consisted of reporters placed in the Solomons, New Britain, New Ireland and the Huon Gulf area of New Guinea. Personnel for this service were selected by expedience from unevacuated soldiers, traders, planters, and bushmen in those areas. Gradually new men were found with intimate knowledge of these and/or other enemy occupied areas, and put in such places to strengthen the chain and replace casualties. Equipment was primitive and not very mobile, being mostly "pedal" radios, (the generator operating like a bicycle). This fact caused some loss of personnel and considerable delay in the transmission of reports, but the service was useful, in the evacuation of airmen shot down in those areas, as well as for much needed information.

Central Bureau was, as in other theatres, a low order intercept service, that is, a service capable of cryptanalysis of combat operational codes and their interception. Personnel was entirely British, as there were no qualified linguists or cryptanalysts to be found among American forces.

Technical Intelligence began with the employment of several highly qualified civilians.





Among these was one for instance, who had been loaned by France to Japan to assist them in building their airplane industry.

By June 1942, all units were partially staffed with intelligence personnel composed mostly of grounded airmen. Headquarters used all available men including malarial personnel who could not return to combat zones, but who did not desire evacuation to the States. A small photographic unit was functioning, and a prisoner of war and interrogation section had been formed for air intelligence.

Documents at this time were collected through coast watchers, using trustworthy natives. Order of Battle was functioning well by the end of June, assisted largely by the capture of a Japanese Army Register from a crashed bomber, and securing the unit code of both Army and Navy air forces.

Interrogation of natives was always unsatisfactory because of their natural exaggeration and desire to please.

By March 1943, intelligence was completely organized in Radio Intelligence; Enemy Appreciation; Technical Information; Objective Information and Target analysis; Relief Maps; Geological and Geophysical analysis; Aircraft production; and Photographic Units. Operational intelligence units were in all squadrons, groups, commands and other headquarters.

The principal difficulty of intelligence in Southwest Pacific arose from a lack of existing basic information. Substantially all Dutch records on Netherlands Indies had been either destroyed or lost in the evacuation of Java. No maps of most of the combat areas were available, and these had to be developed from our own photographic coverage. With limited facilities of photo reconnaissance, it imposed a strain on combat photography. Water tables and other geological information had to be derived largely from photographic interpretation. This information had been compiled in detail for the coverage of the Philippines, but even here, the records were destroyed at the enemy invasion.

No vital area was covered by existing background information.

TROOP CARRIER OPERATIONS

The first Troop Carrier Squadron in the Southwest Pacific Area was formed from three transport airplanes consigned to the Philip-

pinas and diverted to Australia early in 1942. All available Australian and Dutch transport airplanes were added. Soon after several additional squadrons were formed, and on 13 March 1943 the 54th Troop Carrier Wing was formed, with its accompanying Combat Cargo, Air Freight Forwarding, Medical Air Evacuation, and Servicing Units.

It was obvious early in the war that the burden on air transport would be heavy because of the lack of roads, railroads, shipping and harbor facilities in the entire area in which the war must be fought. In March 1942 the first squadron (having 14 different types of airplanes), was called on to move the entire 102nd Coast Artillery (AA) and its accompanying equipment from Brisbane to Darwin, a distance of 1800 miles. In May it flew troops and supplies to Wau and Bulolo. Reinforcements and supplies were carried to Kokoda and these troops were supplied by air during the campaign. Four thousand fully equipped men of the 32nd Division were flown from Australia to the Buna area and supplied by air until its capture by Allied Forces. By the end of 1943 four squadrons had carried to the front lines more than 20,000 tons with a loss of 15 airplanes.

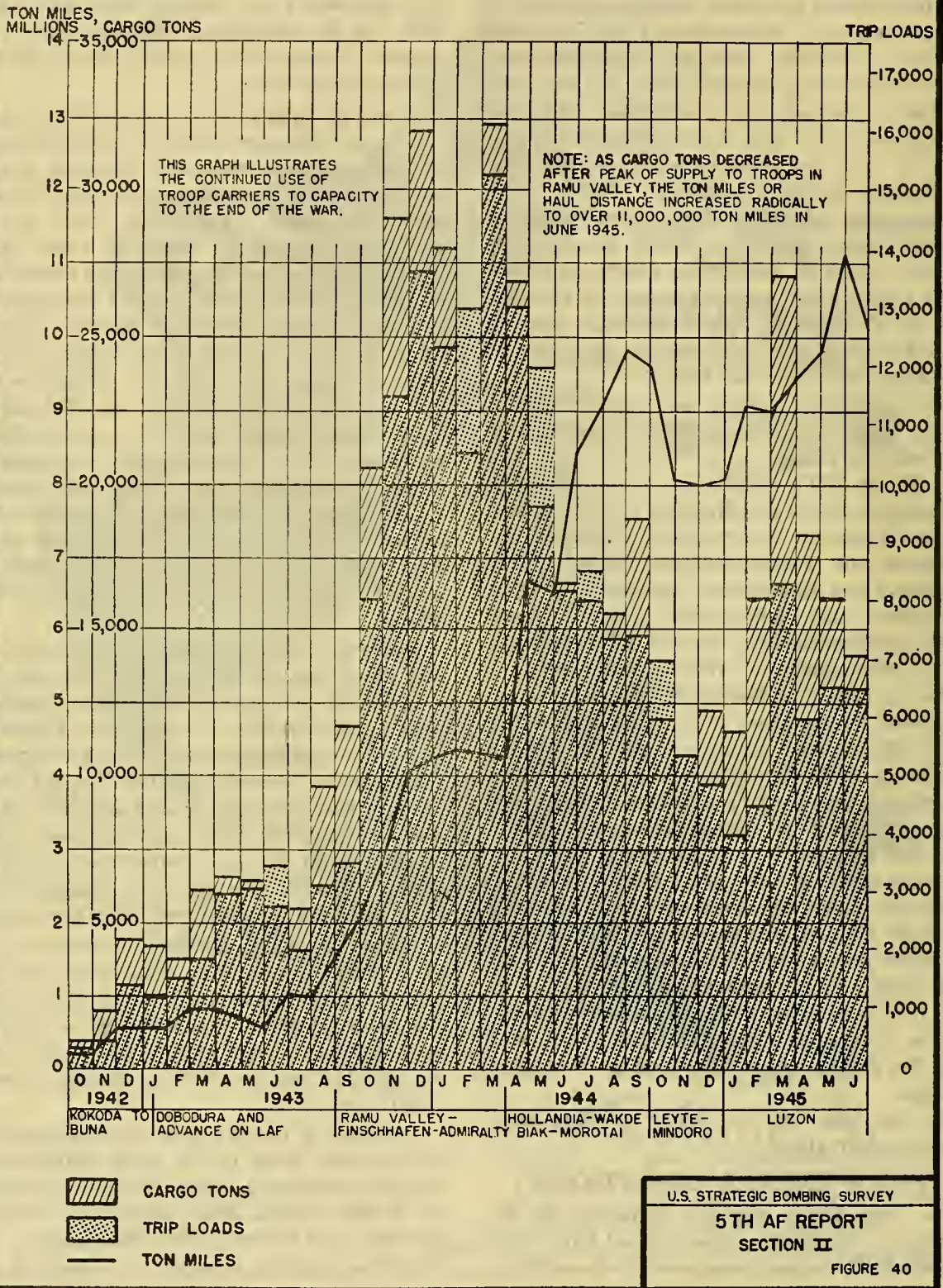
Early in 1944, a division of Australian troops was flown into the Ramu valley and completely supplied by air during their entire campaign. During this period airdromes were constructed at Dumpu and Gusap and all the accompanying transport was accomplished by Troop Carriers. No road was ever built from Nadzab to the area, and bombs, fuel, parts and supplies were all carried by air during our operations from these strips. The lift into the Ramu Valley averaged more than six hundred and sixty tons per day.

From 29 April constant operations were carried on to Hollandia. This effort was necessary so early because of the difficulties of building the road from Humbolt Bay to Lake Sentani, leaving normal supply for ground forces on crowded beaches, with no means of moving them.

The task of moving men and equipment, and maintaining them in the early stages of succeeding campaigns, continued in the occupation of Wakde, Sarmi, Biak, Noemfoor, Sansapor, Morotai, and thence to the Philippines.

In the Luzon campaign, a number of para-

TROOP CARRIER OPERATIONS 5TH AIR FORCE



U.S. STRATEGIC BOMBING SURVEY
 5TH AF REPORT
 SECTION II
 FIGURE 40

troop operations were executed in addition to supply of guerilla forces in addition to the normal demands. Air transport was accomplished for G.H.Q., F.E.A.F., Thirteenth AF and Sixth Army as well as our own needs.

June 16th, 1945 began air transport operations to Okinawa. The air invasion of Japan was commenced on August 30th. By 13 September two infantry divisions with base troops and service units, Eighth Army Hq, advanced echelons of G.H.Q., F.E.A.F., and Fifth AF had been flown in. Seventeen thousand American prisoners of war had been evacuated.

Figure 40 indicates in blue, cargo tonnage carried; in red, trip loads; and in black, ton miles flown by Fifth AF Troop Carriers during the course of the war.

AIR DEFENSE IN SWPA

Area and base air defense in the Southwest Pacific Theater faced entirely different problems than it did in the European Theater. Stationary air warning facilities of long range could seldom be installed until campaigns were well along toward their completion, because of the difficulties of transportation and supply inherent in the terrain. Trained in air defense systems developed by Great Britain for the defense of the British Isles, the Fifth AF was forced to modify radically both methods of employment and types of equipment when we first encountered the Japanese Air Force in northern Australia and New Guinea.

In April 1942 we had a toe hold at Port Moresby on the south shore of New Guinea. The almost impassable Owen Stanley Mountains at our north effectively shielded approaching aircraft from early detection by such radar equipment as we were able to install in the restricted area held by us. Dispersion of air bases to reduce concentration of aircraft was impossible and we therefore found ourselves peculiarly vulnerable to air attacks. This put us at an extreme disadvantage as to adequate early warning to insure air interception prior to the enemy's arrival at the bomb release line. The enemy was able effectively to raid Port Moresby, Wau, Marilinan, and Gusap because of these difficulties. Thus we find the initial factors of terrain affording the enemy screened approach to our bases, inadequate early warning and a shortage of fighters. These factors developed the theory that our most effective

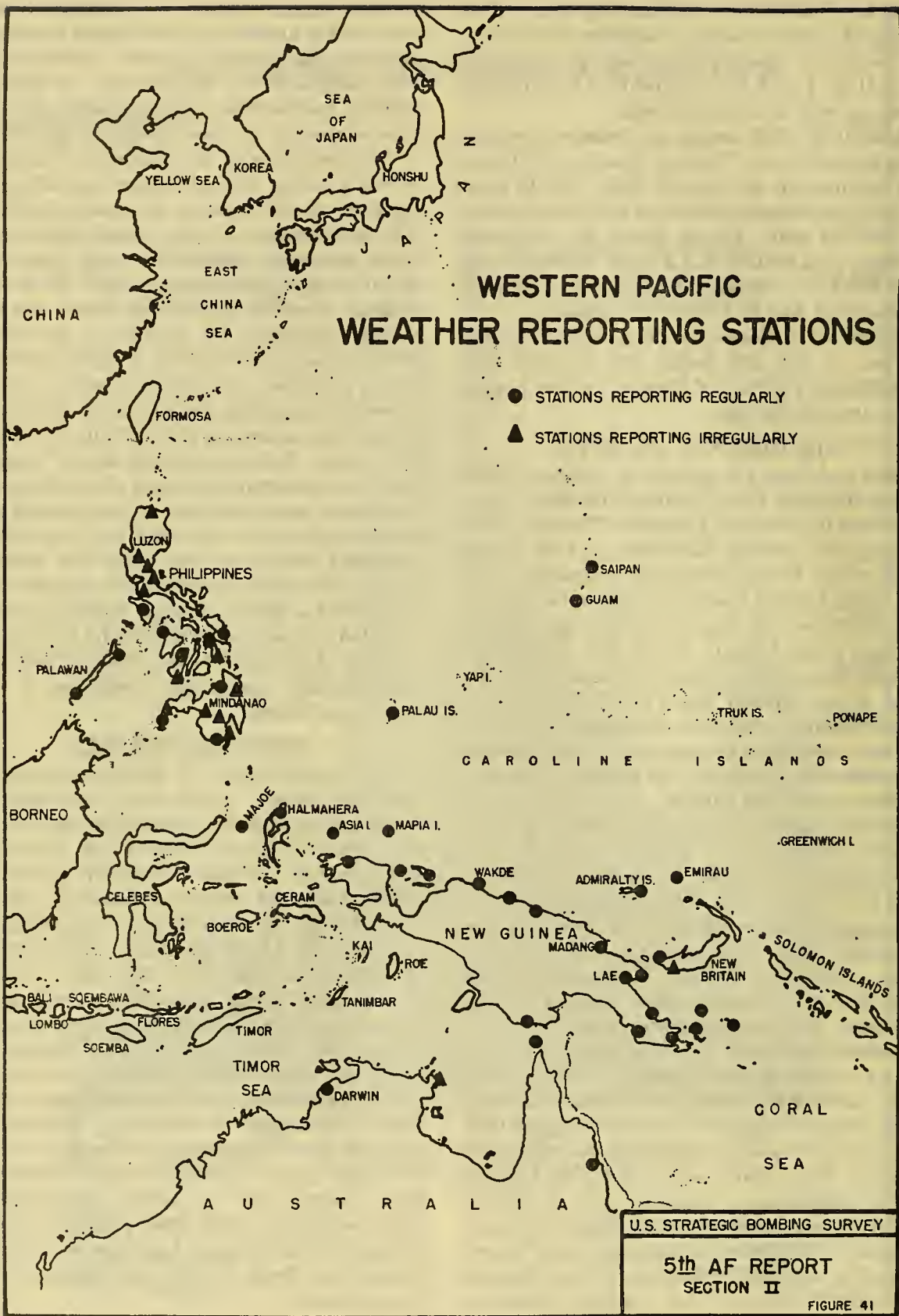
defense against enemy bombardment was to seek out his aircraft on their bases and destroy them on the ground. In the preparation of every campaign our fighters and our light and medium bombardment concentrated on this offensive role as the best means of air defense.

The operations in the Southwest Theatre involved a series of amphibious operations and mobility at the expense of heavy equipment. The development of highly mobile and portable radar equipment capable of being transported by air to new operations, enabled us to set up local air warning nets rapidly which were reasonably adequate for perimeter air defense from a ground alert status. Jungles and mountains provided, in nearly every instance, screened approaches for the enemy forces. Inversely the advantage was with us on offensive operations. Using practically all our resources in offensive warfare, we were able to force upon the enemy such attrition of his aircraft as to prevent him from mounting any serious bombardment threat to the areas we defended. While in the later phases of the war the enemy established a threat through Kamikaze attacks mounted in small scale efforts, he was not able after 12 April 1943 to establish a bomber offense against our ports, airdromes or other vital installations.

WEATHER SERVICE

In the early phases of the war weather favored the enemy. The general movement was south and he was in command of the territory over which it moved toward our forces. He had a highly developed weather service and widely dispersed reporting stations. He augmented this net with weather reporting submarines in Allied territory. To cover his operations he thus had the use of rapidly formed local frontal formations as well as well defined conditions moving over larger areas.

The 15th Weather Squadron serving the Fifth AF and SWPA ground forces worked under the limitations of few stations and, excepting spasmodic reporting by guerilla stations in the Philippines, no regular coverage from any part of enemy territory other than that reported by our aerial reconnaissance. Some assistance was later given by Central Bureau interception of Japanese reports from Rabaul and Truk, and in later phases the Jap home islands.



In our advance from Port Moresby in the southern hemisphere through equatorial and northern tropical zones to north temperate areas of Okinawa and Japan, demands were heavy for long range forecasting to cover advance planning. It became necessary to develop a means of forecasting tropical weather, and satisfactory advance was made through experience and research. The number of abortive missions decreased constantly as our advance progressed. They amounted to only 7 percent during the Leyte Campaign.

Communications difficulties were ever present. Much data was lost by their inadequacy and delays prevented receipt of reports for many hours. An outstanding example occurred during the Leyte campaign when the Fifth AF could not adequately serve one of its attached bombing units on Palau because it operated under Navy communications.

Weather reconnaissance was flown regularly over large parts of enemy controlled territory and water areas from which no other means of reporting was possible. As rapidly as possible trained weather personnel were put into the Philippines and served with guerilla stations. Outlying stations were advanced wherever possible and those existing at the invasion of Leyte are indicated.

For the remedy of coordination difficulties, after the merging of areas of responsibility on the approach to Japan, all AAF weather services were centralized by reporting directly to Chief of Weather Service in Washington.

COMMUNICATIONS AND AIRCRAFT WARNING

Command Communications

Until the Luzon Campaign our operations in the SWPA were characterized by a series of airborne and amphibious shore-to-shore and island-to-island landings which in effect constituted wide envelopments of enemy held territory. Terrain secured in each operation was usually limited in area to that required for development of an air and land base, and was separated from other similar air and land bases by wide expanses of mountainous jungle, enemy held territory, or sea.

Early in the New Guinea Campaign it became evident that air force organization had to be patterned to the peculiar requirements of these "stepping stone" operations. Hence, for each

operation, air force organizations were grouped under Air Task Force Headquarters, organized provisionally.

The communications requirements of each air task force called for a relatively large communications installation at headquarters to provide service to subordinate units in the area, to higher (air force) headquarters, to adjacent air task forces and (for liaison purposes) to ground force and naval sea and air organizations and installations.

Communications personnel and equipment on the basis of the then existing tables of organization and equipment proved unsuitable and utterly inadequate to the requirements of this form of organization. The time element did not permit completion of action for formal reorganization of units, and equipment of required types and in adequate quantity was not available in theater stocks. Improvisation was resorted to by stripping from squadrons and groups, and from signal service organizations, all communications personnel and equipment except the bare minimum required for internal unit operations, and pooling them in a provisional communications organization operating at Air Task Force Headquarters. This organization was later formalized in a wing (air task force) signal company, based on the team organization provided for in T/O 11-500, and a bomber communications squadron (also based on T/O 11-500), which provided an air ground communications section for each air task force. The two units served the Air Task Force totaling approximately 225 to 300 officers and enlisted men, depending upon team composition which was based on Task Force mission. Reserve teams were held at Air Force Headquarters for attachment as needed.

Owing to the distances spanning air forces installations and the fact that wire could not, in the majority of cases, be installed, dependence had to be placed on radio. Manually operated radio circuits with associated cryptographic systems were found utterly unsuited to the requirements of air force operations where speed with accuracy in the dispatch of operational messages was of paramount importance. This was particularly true in those instances where Air Task Force Headquarters and Air Force Headquarters were from 100 to 500 miles apart. In an effort to circumvent this defici-

ency, several difficult wire construction projects through mountainous jungle terrain were undertaken, the outstanding one of which was the two wire carrier system between Port Moresby and Dobodura, which spanned the jungle thicknesses of the Owen Stanley range. This project was executed jointly by the Fifth AF and the Royal Australian Corps of Signals. Within the last year, preceding V-J Day, and particularly after V-E Day, an increasing amount of relief was obtained through receipt in the theater of VHF radio equipment and of radio teletype equipment including automatic cryptographic devices.

Aircraft Warning

The same considerations of terrain and distance that influenced the organization of command communications in the Fifth AF had a definite bearing on operation and organization of aircraft warning and air defense. Radar for early warning and fighter and anti-aircraft control had to be dispersed on the basis of a perimeter for each air base area with continuity of early warning along coastal areas provided for only after terrain between bases could be wrested from the enemy or from the jungle itself.

To provide for adequate early warning, radar stations frequently had to be located outside the perimeter established by our own ground forces. This was particularly true in operations along the north coast of New Guinea where rugged terrain screened line of sight radiation from early warning radar sets established within a defense perimeter and unprotected approach corridors behind terrain screens had to be closed by locating additional early warning radar sets at sites outside the perimeter. The outstanding example of this problem was encountered in protection of airdrome areas in the Markham Valley (Lae, Nadzab, Gusap) early in the campaign while the Japs held the Huon Peninsula. The latter presented a solid bulwark of mountains to radar and permitted the Japs to approach along the north shore and through valleys defiladed from our own radar with the result that the first warning of enemy raids was the explosion of his bombs.

Until light weight air-transportable and pack-radar equipment was made available much later in the war, great difficulty was experienced in the establishment of radar due to the

bulk and weight of equipment which consisted chiefly of the mobile SCR-270 and SCR-268 types. No road nets existed and such stations were established by virtually carving sites out of the jungle and muscling equipment into place. Due to the impossibility of moving such equipment any great distance after an amphibious landing, many radar sites represented compromises which were anything but ideal from the standpoint of exploiting the full capabilities of the equipment.

The Royal Australian Air Force had developed a light weight radar set (LW/AW) capable of complete dismantling and manual packing which in the absence of suitable United States equipment was adopted and procured in some quantity by our own forces. This set proved a boon in reinforcing the early warning screen established with our own heavy equipment by permitting establishment of stations in terrain and in locations inaccessible to the mobile equipment.

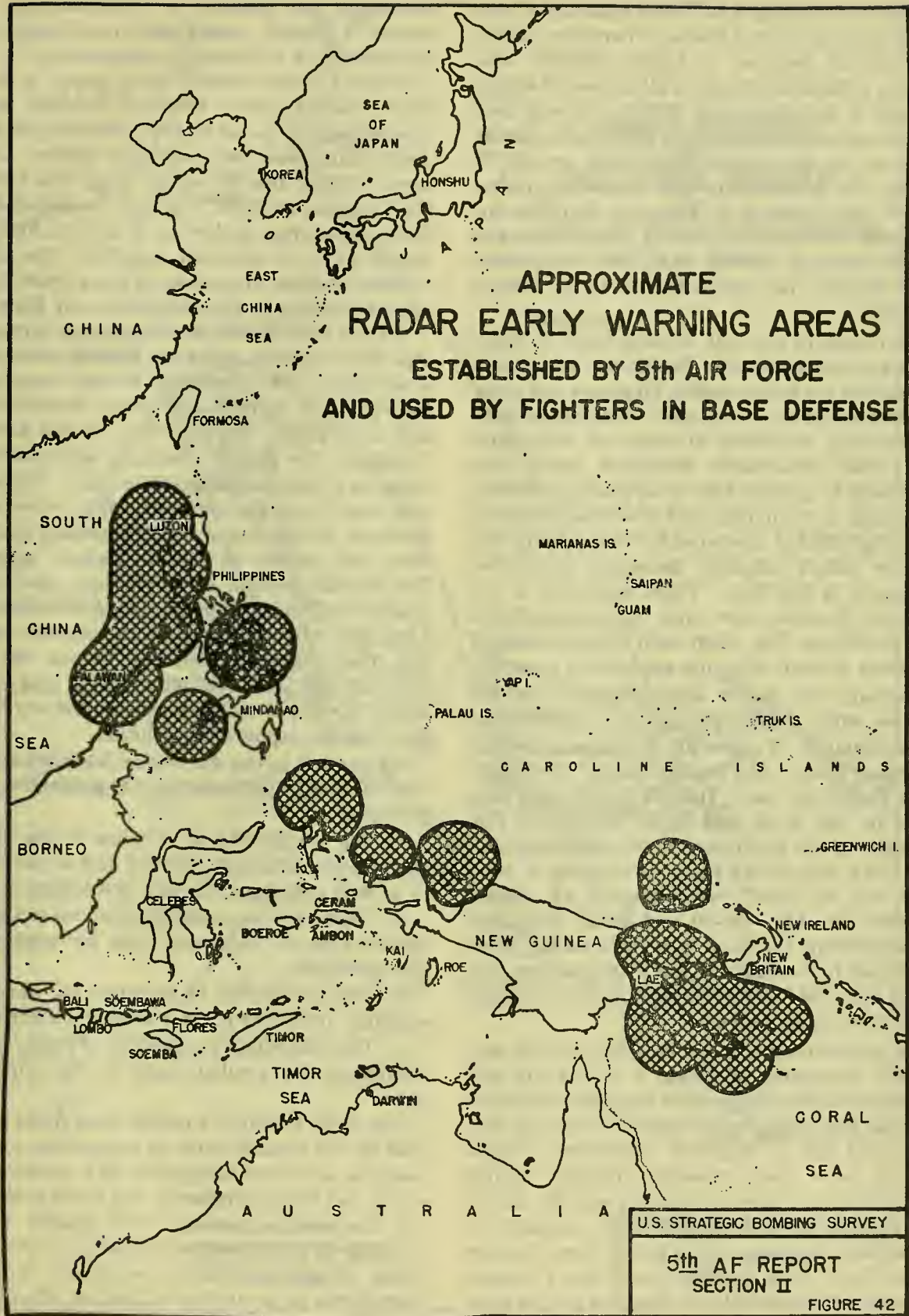
Until the acquisition of modern FM type radio equipment later in the war, the efficiency of aircraft warning from radar stations to control centers was impaired by the manually operated high frequency radio telegraph circuits which had to be utilized for reporting purposes. Furthermore, equipment available for this purpose was unsuited to installation and operation at remote and isolated locations in the tropical jungle owing to conditions of moisture and excessive humidity the difficulty of supplying fuel and oil and the bulk of the equipment itself.

LOGISTIC SUPPORT OF THE AIR FORCE

Any description of the logistic support of the Fifth AF units in the Southwest Pacific must necessarily be divided into two phases; Phase 1: 1942 to April 1944, defense action and attainment of local air superiority; Phase 2: Beginning in April 1944, offensive action made possible by general control of the air in a given area.

During the first phase, combat units operated from the same area for relatively long periods, making possible a conventional system of supply. A large air depot at Townsville, Australia, beyond enemy bomber range, carried large stocks and supplied a 30-day operating level for the forward units. Our problem of distribution within the theater was minor as compared

**APPROXIMATE
RADAR EARLY WARNING AREAS
ESTABLISHED BY 5th AIR FORCE
AND USED BY FIGHTERS IN BASE DEFENSE**



U.S. STRATEGIC BOMBING SURVEY

**5th AF REPORT
SECTION II**

FIGURE 42

to that of obtaining a sufficient quantity of supplies from the United States. Therefore, during this period, because of higher priority elsewhere, critical shortages in all classes of supply existed in the Southwest Pacific. It was here that a well-organized service effort immediately backing up the combat units first proved its worth. In conjunction with Australian industry, it was possible to establish facilities for overhaul and repair of major components and to manufacture critical parts and equipment, and thereby be self-sufficient to a limited extent.

By reason of our lack of experience in tropical wars, the Southwest Pacific had to act as a guinea pig for battle-testing airplanes and other combat equipment. As would be expected, malfunctioning developed in much of our equipment and immediately corrective action was necessary to prevent loss of airplanes, lowering of combat crew morale, and otherwise seriously affecting combat operations. Here again the service effort effected necessary corrective measures in the field. These measures in the form of changes were later incorporated into the production line when such change could be included without affecting production quantity.

Perhaps the major accomplishment of the service effort during Phase 1 was modification in armament of combat airplanes, thereby adapting them to the peculiarities of the Southwest Pacific air war. Installation of fixed nose guns on the A-20 and B-25, increasing fuel capacity of the B-25, nose turret installation on the B-24, and design and manufacture of belly tank for the P-47 revolutionized air tactics against the Jap. A-20 and B-25 airplanes, incorporating the nose gun installation, were first used in the battle of the Bismarck Sea, and by March 1944 the remainder of the modifications were in general use.

In summarizing, it can be said that the successful competition of Phase 1 of our air war against the Jap was possible because of superior combat personnel, employment of superior tactics, and use of superior equipment. These tactics were made possible through theater modification of basic equipment and the ability of maintaining this equipment in constant operational readiness. Neither of these factors would have been possible except for a theater service effort immediately backing up the com-

bat units and capable of implementing the supply, overhaul, repair, and modification requirements of the combat commanders.

Phase 2 of the logistic effort began in April 1944. Rapid moves forward required every type of service to be mobile, including depots. Australian bases were too far distant to be used. Direct line of supply from the United States began at BIAK. Supply levels were cut down, sometimes as low as 5 days in fuel and fifteen days in technical supplies. The basic logistic problem covered everything from shortage of supplies to the distribution of them.

On our side, a flow of replacement airplanes and other supplies from the United States was accelerated. The airplanes, for the most part, incorporated desired armament modification, and as a result, the functions of the Service Command for repair, overhaul, and modifications on a large scale ceased to exist. We were now ready to make long and rapid movements forward, the success of which depended entirely upon our ability to provide logistic support. The logistic success of amphibious operations against Hollandia, Morotai, Leyte, Mindoro and Lingayen was contingent on the landing facilities for cargo-type aircraft at the earliest moment, and in no case later than D plus 5. In short, Air Force mobility became the key word and logistic support the solution.

As applied to the Air Force, logistic support evolved itself into the ability to accomplish the following:

1. The availability of supplies in the objective area in sufficient quantity and so packaged to permit easy handling and identification.
2. Means for transporting supplies to the objective area at the proper time for support of the operation.
3. The availability of facilities for handling supplies, including ports, roads, and airdromes.
4. The immediate availability of replacement equipment for combat units in the objective area.

Air corps technical supplies were made available to the assault units in convenient combat packups and were resupplied by a combination of air and water shipment. All items constituting the combat packup were readily transportable by all cargo-type aircraft. In the early phase of each operation, petroleum products were flown in by air but utilization of aviation



gas barges usually provided bulk gas by D plus 5.

The establishment of air depots at Finschhafen, Biak, Leyte, and Manila provided the means for repair, replacement of airplanes, and air corps technical supplies at points immediately in the rear of the combat area. It was possible, therefore, to make available initial air resupply as it became necessary. Replacement equipment was processed and placed in combat readiness at these depots and made available for immediate delivery. In the later stages of the campaign, supply barges and a number of small cargo vessels were made available to the Service Command, greatly enhancing air force mobility.

It can be said generally that internal supply of the Fifth AF was never a serious handicap to operations. The occasions when shortage of supply ran dangerously close to curtailing operations must be accepted as a standard hazard of Pacific operations. The success of the logistical support given provides proof that the air force can operate effectively in undeveloped tropical country.

Potential Accomplishment With Specialized Equipment

The structure of the multitudinous coral atolls in the south and west Pacific makes many of them particularly adaptable to airdrome construction. Seldom, however, is one found that can be supplied by shipping in the quantity and speed needed. Coral reef structure frequently constitutes an effective barrier, holding even the smallest ship many hundreds of yards from a supply shore. The same reef prohibits the use of many sites along the main land masses, but in the atolls there is usually a large inner lagoon.

In our reach from Hollandia to the west there were five points under consideration for possible capture in the "air steps" toward the Philippines. These were (1) Asia-Mapia Islands, (2) Wakde Island, (3) Biak, (4) Noemfoor and (5) Manokwari. Wakde and Noemfoor were known to be lightly defended. Biak

was heavily defended and would be expensive. Manokwari was heavily garrisoned and had a complex system of defenses. Asia-Mapia had fine sites for airdromes and ample coral for easy construction but outside the large inner lagoons, dangerous reef structure would have held shipping off some three-quarters of a mile from supply beaches. Construction of piers would have been prohibitive even if the materials and engineering had been available by air. Asia-Mapia could have been supplied, however. By this time the Fifth AF had proven its ability to build bases, and maintain large air and ground garrisons entirely by air. It had been done at Gusap, Wanagela, Dobodura and Marilinan, and Asia presented no greater difficulties except that there was no suitable area for C-47s to make their original landing with engineering equipment and personnel.

General Kenney believed he could do the job with C-47s on floats and requested them for the purpose. They were not available as those in the United States had been previously assigned to other theaters.

The inner lagoon at Asia, as in so many other places, offered a great expanse of quiet, protected water, ample for landing such an airplane with a heavy load.

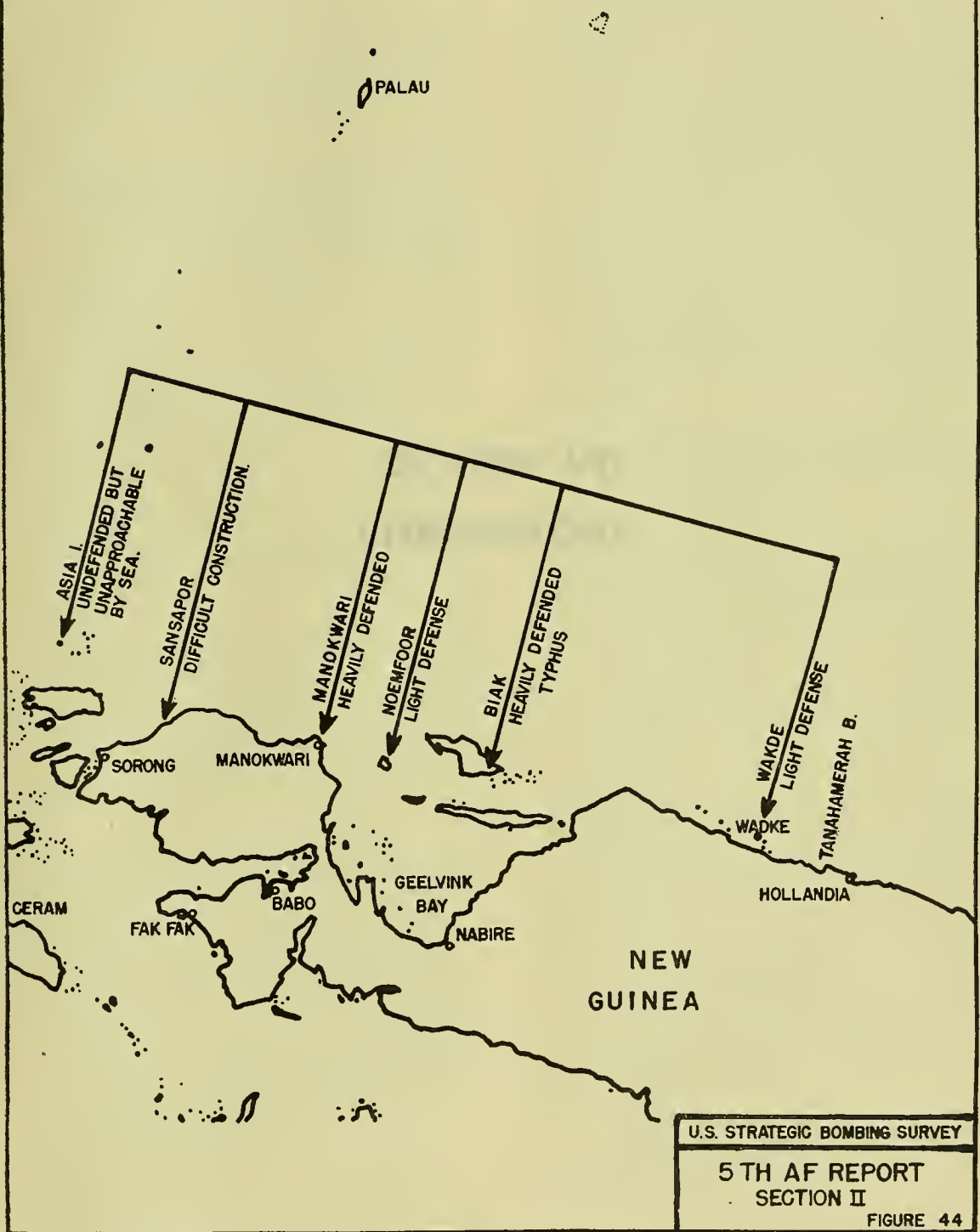
We had cut 6 x 6 trucks and heavy equipment in two and loaded them in C-47s and welded them together at remote unloading points, and could easily have done the same here.

Neither of these islands had any defense as they were of no value to the enemy. Asia had a small weather reporting station of some half dozen Japanese. Had the specialized logistic equipment (C-47s on floats in this instance) been supplied, Biak need never have been captured, thus saving a great cost of ground forces, time and supply.

Asia is but one example. Many similar atolls are to be found along the entire line of SWPA advance. Had it been possible to have exploited this flexibility of air force, our progress could have been more rapid and considerably more economical.

ASIA ISLAND

131° 15' E; 1° N



SECTION VII
CHRONOLOGY

SIGNIFICANT DATES
 FAR EAST AIR FORCE
 ALLIED AIR FORCES SWPA
 FIFTH AIR FORCE
 FAR EAST AIR FORCES

Philippine Campaign, 8 December 1941—
 7 May 1942*

- 8 December
 (Phil. Time)—Japanese aircraft destroy approximately half of the Far East Air Force at Clark and Iba fields.
- 10 December
 Japanese landings at Aparri and Vigan opposed by 10 B-17s, escorted by a few P-40s and P-35s. Lt. Samuel H. Marrett, pursuit squadron commander, and Capt. Colin P. Kelly are lost in this action.
- 16/20 December
 14 B-17s are evacuated to Australia.
- 21 December
 The Japanese land at Lingayen Gulf.
- 2 January 1942
 Japanese occupy Manila.
- 17 March
 General MacArthur reaches Australia.
- 11 April
 Bataan Forces surrender to the Japanese.
- 11/14 April
 General Royce leads a force of 3 B-17s and 10 B-25s on a mission from Australia to the Philippines. The planes, staging through Del Monte, bombed airfields and shipping at Luzon, Cebu, and Mindanao.
- 6 May
 Corregidor surrenders.
- East Indies Campaign, December 1941—March 1942
- 16 December 1941
 Japs land at Luton in Sarawak.
- 19 December
 Organization of United States Forces in Australia under Brig. Gen. Julian F. Barnes.
- 24/29 December
 Japs land near Kuching, and after sporadic fighting, capture it.
- 29 December 1941
 to 1 January 1942
- 7 B-17s bomb Davao in first American raid from NEI bases.
- 10 January
 Jap landings at Tarakan in Borneo and Menado in Celebes, using paratroopers. Gen. Sir Archibald P. Wavell arrives in Java to assume command of the ABDA (American, British, Dutch, Australian) Area. Generals Brett and Brereton are later assigned to his staff, and General Barnes resumes command of USAFIA.
- 16 January
 5 Java-based B-17s, staging through Palembang in Sumatra, bomb Soengi Batani airfield on the Malayan peninsula.
- 17 January
 3 LB-30s and 2 B-17s score hits on airfields and shipping near Menado, 2 LB-30s and 1 B-17 lost.
- 20/24 January 1942
 Jap convoy in Strait of Makassar attacked by Allied planes and naval forces.
- 24/25 January
 First American P-40s arrive in Java, 14 planes of the 17th Pursuit Squadron (Provisional).
- 23/26 January
 Kendari in Celebes occupied by Japanese.
- 25 January
 Balikpapan is occupied by the Japanese.
- 30 January
 Landings on Ambon and other nearby Dutch islands.
- 9/13 February
 Makassar in Celebes and Bandjermasin in Borneo occupied.
- 10 February
 The first A-24 [of the 91st Squadron, 27th Bombardment Group (L)] arrives in Java.
- 14/17 February
 Palembang in Sumatra is occupied with aid of paratroopers.
- 19 February
 A total of 12 B-17s and 3 LB-30s score

* On 7 December, Maj. Gen. L. H. Brereton was in command of the Far East Air Force.

hits on Jap cruisers and destroyers near Bali. First American dive bomber mission in the NEI against same targets results in claimed sinking of a cruiser and a transport. Approximately 150 carrier and land-based aircraft attack Darwin for its first and probably heaviest raid of the war. In addition to damage to buildings, and air and harbor installations, 9 P-40s were destroyed in the air, 6 Hudsons, 2 P-40s, and 1 LB-30 on the ground. 5/10 enemy aircraft were shot down. 6/7 Allied ships were sunk, and 8 badly damaged.

20 February 1942

Japanese forces, including paratroopers, land on Timor.

25 February

ABDA Command dissolved.

26/28 February

Allied Naval defeat in the Java Sea.

27 February

Seaplane tender Langley en route to Java is sunk by Japanese planes. 32 P-40s on board are lost.

28 February

First Japanese landings on Java.

3/4 March

5 B-17s and 3 LB-30s evacuate as many as possible of remaining American personnel to Broome, Australia.

3 March

Severe Jap raid on Broome, 2 B-17s, 2 B-24s, and 2 Hudsons destroyed.

Defense of Australia, January to July 1942

20 January 1942

More than 100 Jap carrier-based bombers and fighters bomb Rabaul in New Britain.

23 January

Rabaul occupied.

24 January

Kavieng in New Ireland taken by the Japanese.

8 February 1942

Gasmata in New Britain occupied by the Japanese.

23 February

4 of 9 B-17s reach Rabaul to carry out first AAF attack on that Jap base. Results were unobserved.

8 March

Japanese land at Salamaua and Lae.

10 March

Two U. S. carrier groups execute coordinated attack upon Jap shipping at Lae and Salamaua. The following are claimed sunk: 5 APs or AKs, 2 CAs, 1 CL, 1 DD. B-17s follow up the attack with undetermined results. Japs land at Finschafen.

12 March

American forces land in New Caledonia.

18 April

Allied command under General MacArthur has been established in Australia.

20 April

General Brett is announced as commander of the Allied Air Forces.

27 April

The United States Army Air Services is established under Maj. Gen. Rush B. Lincoln as a part of the Allied Air Forces.

30 April

A Japanese patrol reaches Alexishafen.

4/7 May

Battle of the Coral Sea. Some B-17s, B-25s, and B-26s participate.

16 May

Trial of gasoline bombs at Lae.

31 May

Sydney is attacked by midget submarines.

The Papuan Campaign, 20 July 1942—23 January 1943

20 July 1942

GHQ SWPA is closed at Melbourne and opened at Brisbane.

21/22 July

B-17s, B-26s, and B-25s supported by fighters attack a Japanese convoy landing troops at Buna and Gona.

4 August

Maj. Gen. George C. Kenney succeeds General Brett as commander of the Allied Air Forces.

7 August

13 B-17s carry out an effective raid on Rabaul in coordination with the marine landing upon Guadalcanal. 7 Zeros and 1 B-17 are shot down. Probably 50 Jap-

- anese aircraft are destroyed on the ground.
- 25 August
The Japanese land troops at Milne Bay. 12 P-400s strafe Buna airdrome leaving approximately 12 aircraft burning on the ground.
- 3 September
Fifth AF is constituted and General Kenney named its commander. V Bomber Command reconstituted.
- 10 September
The Japanese have been completely defeated at Milne Bay.
- 12 September
9 A-20s escorted by P-400s drop parafrags on Buna air strip. This is the first use of this type bomb in the SWPA. Support of ground forces is begun in weight.
- 14 September 1942
The Japs reach Ioribaiwa Ridge less than 30 miles from Port Moresby.
- 27 September
The Air Service Command, Fifth AF is established.
- 28 September
The Japanese are outflanked at Ioribaiwa Ridge.
- 5 October
Australian infantry battalion is transported by Allied planes to Wanigela Mission on the north side of the Owen-Stanley range.
- 9 October
Following an incendiary attack by RAAF PBY's, 30 B-17s drop more than 54 tons of instantaneous and delay demolition bombs on Rabaul. While this target had been continually attacked this was the largest bombing attack on that objective to date.
- 23 October
11 B-17s attack Rabaul probably sinking 1 cruiser, 1 destroyer, and 2 merchant vessels. In this mission skip bombing was first employed in combat in the SWPA. This raid was followed by continuous attack on this target.
- 8/9 November
2 regiments of the American 32d Division are transported by Allied troop carriers to Wanigela and to other points across the Owen-Stanleys.
- 11 November
Organization of the V Fighter Command. This organization had been referred to as the V Fighter Command (Prov.) since 2 October 1942.
- 17 November
B-24s are used for the first time against Rabaul. Decision has been previously made to replace all B-17s by B-24s.
- 21/22 November
Dobodura strip ready for use by troop carrier planes.
- 9 December
Australians capture Gona.
- 14 December
Americans occupy Buna.
- 27 December
12 P-38s attack 20/30 enemy fighters in the Buna-Gona area and shoot down 9 fighters and 2 dive bombers. 1 P-38 is lost. This is the first significant combat engagement of the P-38 in the SWPA.
- 5 January 1943
6 B-17s and 6 B-24s strike Rabaul shipping. Hits scored on about 10 ships, 1 broke in two, 6 others burning, 3 enemy fighters shot down. 2 B-17s, one carrying Brig. Gen. Kenneth Walker, V Bomber Commander, are lost.
- 6/9 January 1943
B-17s, B-24s, B-25s, escorted by P-38s attack a Japanese convoy which succeeds in landing troops at Lae. At least 2 transports are sunk and more than 60 aircraft destroyed. 10 Allied planes are lost.
- 22/23 January
Allied victory in the Papuan Campaign is declared complete.
- Operations During the Northeast New Guinea Phase,
29 January 1943—19 March 1944**
- 29/30 January 1943
122 transport planes ferry in reinforcements, munitions, and supplies to besieged Australians at Wau.
- 30/31 January
Japanese at Wau defeated and driven back.
- 6 February
11 P-39s, 8 P-40s, 5 P-400s, and 22 P-

- 38s shoot down 24 enemy aircraft over Wau. 3 P-40s are damaged.
- 14 February
30 B-17s and 4 B-24s drop approximately 50 tons of bombs and almost 4,000 incendiaries upon Rabaul. 100-lb. wire-wrapped bombs are also used. This is the largest bombing raid to date in the SWPA.
- 1/4 March
Allied air victory in the Battle of the Bismarck Sea results in sealing off the Huon Gulf from Jap convoys and proves the effectiveness of the modified B-25 strafer in mast-head attack.
- 5 March
Activation of the Buna Air Task Force at Dobodura, later known as the First Air Task Force. 49th Fighter Group established here by the middle of the month.
- 13 March
Headquarters and Headquarters Squadron, 54th Troop Carrier Wing is activated.
- 3 April 1943
Elements of the 162d Regiment land at Morobe harbor, 75 miles from Salamaua.
- 1/4 April
Attack on Jap convoy in Kavieng area results in severe damage to a number of destroyers and a MV, and claimed sinkings of 2 cruisers.
- 12 April
106th Japanese raid against Port Moresby is carried out by 45 bombers and approximately 60 escorting fighters. At least 3 B-25s and 1 Beaufighter on the ground are damaged beyond repair, others are damaged. 22 enemy planes are shot down. 2 P-39s are lost.
- 2 May
21 Bettys escorted by 25/30 Zekes and Oscars carry out Darwin raid no. 54. 5 enemy fighters and 1 bomber are shot down. 13 intercepting Spitfires are either shot down or crash because of fuel shortage.
- 20 June
Work is begun on Tsili Tsili airdrome.
- 23 June
17 B-24s make a 2,000-mile flight to Makassar in Celebes and drop 38 tons of bombs on docks and shipping. This is the largest number of heavy bombers used in a single raid in the Darwin Area to date.
- 30 June
Allied forces land at Nassau Bay, on Kiriwina and Woodlark Islands, and on Rendova, Vangunu, and New Georgia.
- 14 July 1943
The first P-47s arrive at Port Moresby from Brisbane.
- 22 July
First Australian-based raid is carried out against Soerabaja, a 2,400-mile trip by 6 B-24s.
- 27 July
25 B-25s and 18 B-24s drop 133 tons of bombs on Salamaua, probably the heaviest attack on that area to date.
- 5 August
Activation of Second Air Task Force. First units proceed to Tsili Tsili.
- 9 August
33 B-24s and 7 B-17s drop 140 tons on Salamaua.
- 13 August
37 B-24s, 13 B-17s, and 9 B-26s break bombing record for the theater by dropping 175 tons on the Salamaua area. 9 B-24s make the 2,200-mile round trip from Darwin to Balikpapan and drop 11 tons of bombs.
- 17 August
12 B-17s, 36 B-24s, 32 B-25s and 85 P-38s make a coordinated attack on the four Wewak airdromes (Boram, But, Dagua, and Wewak). 3 heavy bombers are lost.
- 18 August
9 B-17s, 17 B-24s, 53 B-25s and 74 P-38s attack Wewak. 3 B-25s and 2 P-38s are lost. Damage on the ground from the two-day raid is heavy, and probably most of the 200 planes previously reported on the Wewak dromes have been either badly damaged or destroyed. Follow-up strikes continue.
- 1 September 1943
33 B-24s and 43 B-25s carry out the heaviest bombing raid to date in the

- SWPA, dropping 201 tons of bombs on the Alexishafen-Madang area.
- 4 September
After preliminary bombardment of nearby bases and softening up of landing beaches, Allied forces land near Lae.
- 5 September
With bombardment and fighter support, 78 C-47s drop paratroopers of the 503d Paratroop Regiment at Nadzab.
- 7 September
Troop Carrier planes land at Nadzab.
- 13 September
Salamaua is captured.
- 16 September
Lae is captured.
- 19 September
The 7th. Australian Division moving through the Ramu valley, principally by troop carriers, capture Kaiapit.
- 22 September
First units of the Second Air Task Force arrive at Nadzab.
- 24 September 1943
The organization of the Third Air Task Force is announced at Port Moresby.
- 27 September
17 B-24s, 90 to 100 B-25s, 121 Allied fighters attack Wewak airfields and harbor and drop more than 160 tons of bombs. This is the climax of regular neutralization strikes.
- 1 October
First troop carrier plane lands at Gusap in the Ramu valley.
- 2 October
Finschafen is cleared of the enemy.
- 10 October
12/13 B-24Ds equipped with blind-bombing (LAB) equipment are assigned to the 63d Bombardment Squadron of the 43d Group.
- 12 October
The Fifth AF begins final stages of Rabaul offensive. 63 B-24s, 107 B-25s, and 106 P-38s hit airdromes and shipping and drop more than 300 tons of bombs. 26 Japanese aircraft are shot down, and perhaps 100 are destroyed on the ground. Numerous small vessels and at least 1 DD and 1 MV are sunk. 4 B-24s and 1 B-25 are lost.
- 15 October 1943
59 P-38s and 8 P-40s intercept a large force of Japanese bombers and fighters over Oro Bay and shoot down 27 Vals and 20 Japanese fighters. 1 P-38 is lost.
- 20/21 October
First units of the Third Air Task Force are flown to Gusap.
- 2 November
More than 80 B-25s and approximately the same number of P-38s strike at shipping in Simpson harbor, Rabaul. 68 enemy aircraft are shot down. At least 1 destroyer, 5 merchant vessels, a minecraft, and a tug are claimed as sunk. 10 B-25s and 10 P-38s are lost. This attack was coordinated with the South Pacific landing on Bougainville.
- 25 November
The Australians capture Sattelberg.
- 19 November to
25 December
V Bomber Command and First Air Task Force carries out 1,845 sorties and drops 3,926 tons of bombs on Cape Gloucester and northern New Britain in preparation for landing on Cape Gloucester.
- 13/14 December 1943
All types of Fifth AF bombers carry out almost 300 sorties and drop approximately 700 tons of bombs along the southern New Britain coast.
- 15 December
Elements of the Sixth Army land at Arawe.
- 17 December
American fighters begin operating from Finschafen.
- 26 December
B-24s, B-25s, and A-20s carry out 242 sorties and drop more than 422 tons of bombs on Cape Gloucester area. First Marine Division lands.
- 30 December
Cape Gloucester airfield falls to the Marines.
- 2 January 1944
After preliminary bombing and strafing by Fifth AF, elements of the 32d Division land at Saidor.
- 9 January
The IV and V Air Service Area Com-

mands are officially organized at Port Moresby and Townsville respectively.

14 January
Australians capture Sio.

22 January
Air neutralization of the Admiralties begins.

1 February
First, Second, and Third Air Task Forces become respectively the 308th and 309th Bombardment Wings (H) and the 310th Bombardment Wing (M).

3 February 1944
58 B-24s, 62 B-25s, escorted by 16 P-38s, 33 P-47s, and 17 P-40s drop 200 tons of bombs and nearly 1,000 parafrags and parafrag clusters on the Wewak dromes. 43 enemy aircraft claimed destroyed on the ground and 15 in the air. Wewak as a target is destroyed.

15 February
American troops land on Green Island.

15/16 February
Two groups of medium bombers together with B-24s and PBYS sink many ships in a 17-ship convoy near New Hanover. This is the last attempt to reinforce Rabaul against the air blockade.

29 February
The 5th Cavalry Regiment lands on Los Negros Island, and captures Momote air strip.

24/25 February
The 85th Air Defense Wing arrives in the SWPA and proceeds to Gusap.

4 March
First important attack on Hollandia is carried out by 22 B-24s.

11/19 March
Fifth Air Force bombers (B-24s, B-25s, and A-20s) drop 1,588.92 tons of bombs on the Wewak area. The Japanese Army Air Service is forced to withdraw to Hollandia.

19 March 1944
A Japanese convoy of 2 transports a lugger, a barge, and 3 corvettes succeeds in landing reinforcements at Wewak. But on its return journey, it is attacked by 40 B-24s and 62 B-25s, and all ships are destroyed.

Netherlands, New Guinea, 30 March—17 August 1944

30 March thru
16 April 1944
Fifth AF carries out 993 bomber and 572 fighter sorties against Hollandia, dropping 1,832 tons of bombs. Japanese air strength in this area decimated.

11 April
Organization of 13th Air Task Force.

18 April
21 B-24s of the 13th Air Task Force from Momote hit Woliyai.

22 April
Allied amphibious forces land at Aitape, Humboldt, and Halmahera Bays.

24 April
C-47s land at Tadj. Australians enter Madang.

25 April
Hollandia air strips occupied.

26 April
Australians enter Alexishafen.

28 April
46 B-24s bomb Biak without fighter cover. Continuous follow-up of this strike made until invasion.

April
Arrival of 86th Air Defense Wing. 91st Photo Reconnaissance Wing replaces 5212th Photo Wing Reconnaissance (P).

11 May 1944
45 B-24s of the 13th Air Task Force hit Truk.

17 May
Elements of Sixth Army establish beachhead at Arara on mainland opposite Wakde supported by 6 B-24s, 38 B-25s, and 15 P-40s.

18 May
Landing on Wakde.

27 May
Planes from Fifth AF bases made their first reconnaissance of the Philippines. Landing on Biak by U. S. forces after 15 days of aerial bombardment by the 13th Air Task Force and the Fifth AF.

7 June
Mokmer drome captured.

8 June
10 B-25s of the 17th Reconnaissance

Squadron claim the sinking of 4 DDs in a convoy consisting of 2 CLs and 5 DDs. 3 B-25s are lost.

9 June
22d Bombardment Group makes first landbased daylight strike against a Palau airdrome.

15 June
Australian troops occupy Hansa Bay. Formation of Far East Air Forces (Prov.) under General Kenney to include the Fifth AF under Lieut. General Whitehead, and the Thirteenth AF under Maj. Gen. St. Clair Streett. Formation of Far East Air Service Command.

20 June 1944
Sorido and Borokoe airdromes seized.

21 June
Planes of 375th Troop Carrier Group land at Owi.

23 June
The A-26 makes its operational debut in the SWPA with a barge sweep south of Manokwari.

2 July
Allied troops land at Noemfoor.

3/4 July
Troop carriers from Hollandia drop 2,424 paratroopers on Kamiri drome, Noemfoor.

6 July
RAAF P-40s land at Kamiri.

27 July
Fifth AF fighters make first flight over Halmahera.

30/31 July
U. S. troops seize the coastal area at Cape Sansapor and Cape Opmarai on the northwest coast of Netherlands New Guinea. Amsterdam and Middleburg Islands off Cape Opmari also occupied during the day.

5 August
A small number of B-24s bomb Sasa airfield northeast of Davao on Mindanao. These attacks increase in intensity during the month.

17 August 1944
Supported by air and naval forces, Allied troops land at Wardo beach on Biak and in the Cape Goodehoop area on the Vogelkopf peninsula.

The Netherlands East Indies and the Philippines

During this period bombers from both the Fifth and Thirteenth Air Forces were involved in the missions listed.

23 August 1944

Galela airfields are attacked by approximately 60 B-24s which drop 130 tons of demolition bombs. P-38s, operating at what was probably the greatest distance from their base in the history of this theater, accompanied the bombers, beginning a continuous neutralization of Halmerheras.

3 September

Approximately 60 B-24s hit Langoan airfield south of Menado in first large scale raid on northeastern Celebes.

15 September

MacArthur's forces, coordinated with the Third Amphibious Forces attack on Palau, land on the southwest coast of Morotai island.

15 September

Decision made to proceed direct to Leyte.

30 September

70 B-24s are dispatched to attack Balikpapan: More than 50 bomb the Pandansari refinery and the town area, 10 to 12 the oil tanks at Semoi, and the others the airfield at Paloe in central Celebes. More than 110 tons of bombs are dropped. 4 B-24s are missing, and 7 enemy fighters are shot down.

10 October 1944

125 B-24s attack Balikpapan and drop 160 tons of bombs which virtually demolish the cracking and paraffin plants. For the first time fighters escort bombers to this target, flying 1,670 miles from bases in Morotai. 3 American bombers and 1 fighter are missing; approximately 55 enemy aircraft are shot down.

20 October

A strong force of American troops land on Leyte island in the Philippines.

22 October

Headquarters of an advance echelon, Fifth AF, arrives on Leyte.

27 October

34 P-38s of the 49th Fighter Group land at Leyte. AAF relieves ANF of the air defense of Leyte.

- 28 October
Second enemy ORMOC convoy.
- 1/3 November 1944
Convoy #3 attempting to reinforce ORMOC is attacked by B-24s and fighters. 2 ships are claimed sunk.
- 9/10 November
Convoy #4 is attacked by B-25s and fighters. 2/3 ships and 5/7 escort vessels (including DDs) are sunk.
- 11 November
In convoy #5, Navy claims the Third Fleet sank 4 ships and 2 DD sunk.
- 14 November
Convoy #6 is not attacked.
- 21 November
Convoy #7: 3 small ships are sunk.
- 24/25 November
Convoy #8: P-40s and P-47s sink 5 ships.
- 28/29 November
Convoy #9: approximately 70 P-47s and P-40s and 3 B-25s sink all ships in a 12 ships convoy escorted by 3 destroyer escorts according to a Navy report.
- 3/5 December
Fifth AF "Snoopers" inaugurate attacks by Allied Air Forces bombers on Luzon establishments by hitting Clark and Zoblan airdromes.
- 6 December
Japanese launch ground and paratroop attack on Burauen airfields on Leyte.
- 7 December
56 enemy planes are destroyed by American fighter planes in the last important air engagement over Leyte. 1 P-38 is lost.
- 7 December
Convoy #10: All ships are claimed as sunk in a 9-ship convoy escorted by 3 DD.
- 12 December
Convoy #11: 5 transports and 4 escorts are claimed as destroyed or probably destroyed.
- 14 December
Fifth AF begins a series of dawn-to-dusk attacks on enemy airdromes on Negros.
- 19 December
Fifth AF fighters begin operating from San Jose air strip on Mindoro.
- 26 December
GHQ announces end of all organized Japanese resistance on Leyte. Japanese naval task force shells San Jose in Mindoro and is attacked by B-25s, P-38s, and P-47s.
- 1 January 1945
Fifth AF A-20s and P-51s escorted by P-47s destroy 19 small enemy freighters in Palaniz Bay (West Coast of Luzon).
- 3/5 January
American troops occupy Marinduque island in the Philippines.
- 7 January
40 B-25s and 97 A-20s with P-38 escort make a low-level bombing and strafing attack on Clark Field destroying or badly damaging at least 60 enemy aircraft on the ground, prefacing regular air coverage of the area.
- 9 January
U. S. Sixth Army lands at points on Lingayen Gulf.
- 10 January
308th Bomb Wing establishes an advanced command post at Lingayen.
- 15 January
Fifth AF fighters begin operating from Lingayen strip on Luzon.
- 17 January
Allied AF relieves Allied Naval Forces of responsibility for direct operation with the ground forces in the Lingayen area and for protection of convoys en route to and from Lingayen Gulf.
- 21 January
B-24s list Formosa in first large-scale night attack.
- 22 January
Fighters escort B-24s on the first mass raid in the reduction of Formosa.
- 24 January
Fifth AF medium bombers begin operating from Lingayen and Margsdam strips.
- 28 January
Air fields in the Clark Field area are entirely under American control.

- 29 January
American troops land in Subic Bay area after 10 days of concentrated air attack.
- 30 January 1945
Allied ground units make an amphibious landing in Batangas-Tayabas area.
- 31 January
B-24s destroy 25/30 enemy aircraft on Formosa fields.
- 3 February
The 1st Cavalry enters Manila. Units of 11th Airborne Division make parachute landing near Tagaytay Ridge.
- 16 February
Paratroopers of the 503d Regiment land on Corregidor.
- 25 February
All effective enemy resistance is eliminated in Manila according to GHQ.
- 27 February
Organized enemy resistance on Corregidor ceases.
- 28 February
186th Regimental Combat Team lands on Palawan.
- 2 March
Fifth AF B-24s, B-25s and A-20s make their heaviest strike to this date on Formosa attacking 6 airdromes. Only 1 enemy fighter attempted interception. Formosa is daily subjected to air sweeps.
- 8 March
First landings on Mindanao.
- 10 March
Lashio, Burma occupied.
- 18/22 March
Panay occupied.
- 30 March
Last mission by B-29s from China, India bases.
- 1 April 1945 to
21 June 1945
Okinawa Campaign.
- 5 April
MacArthur and Nimitz appointed to lead Army and Navy in the Pacific.
- 7 April
U.S.S.R. denounces neutrality pact with Japan.
- 7 April
First Fighter Escort Mission flown from Iwo Jima in support of B-29 strike.
- 29 April
Occupation of Baguio, Philippines.
- 1 May
Tarakan, Borneo invaded.
- 4 May
Rangoon, Burma occupied.
- 6 May
Davao, Philippines liberated.
- 24/26 May
Superforts Blast Tokyo with Fire Bombs.
- 10 June
Australians land at Brunei Bay, North Borneo.
- 24 June
Australians capture Miri Oil Fields, North Borneo.
- 1 July
Australians land at Balikpapan Bay.
- 5 July
Entire Philippines Liberated.
- 10 July
Fleet Bombers attack Tokyo Area.
- 11 July
Balikpapan Bay, Borneo secured.
- 14/15 July
Fleet Shells Northern Honshu and Hokkaido, Japan.
- 16 July
XXI Bomber Command redesignated Twentieth AF.
- 18 July 1945
Fleet blasts Hitachi, Najima Cape, Yokosuka, Japan.
- 19 July
Fleet blasts Hitachi, Najima Cape, Yokosuka, Japan.
- 26 July
Potsdam Ultimatum (U.S., Britain, China) demands unconditional surrender.
- 29 July
Premier Suzuki states Japan will ignore ultimatum.
- 2 August
General Twinning assumes command Twentieth AF.
- 5 August
VII Fighter Command assigned to Twentieth AF.
- 6 August
First Atomic Bomb on Hiroshima.

8 August

U.S.S.R. declares war on Japan, effective 9 August 1945.

9 August

Second Atomic Bomb on Nagasaki.

10 August

Domei, Official Japanese News Agency broadcasts Japan's willingness to surrender, providing Hirohito's prerogatives are unimpaired.

11 August

Swiss Legation receives State Department's note clarifying Allied position on Emperor and relays note to Japan.

14 August

Last B-29 mission against Japan.

14 August

Official Surrender Text transmitted by Swiss to State Department, carried to White House by Secretary of State Byrnes, and at 7 P.M. President Truman announces end of War.

UNITED STATES STRATEGIC BOMBING SURVEY

LIST OF REPORTS

The following is a bibliography of reports resulting from the Survey's studies of the European and Pacific wars. Those reports marked with an asterisk (*) may be purchased from the Superintendent of Documents at the Government Printing Office, Washington, D. C.

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- *1 The United States Strategic Bombing Survey: Summary Report (European War)
- *2 The United States Strategic Bombing Survey: Over-all Report (European War)
- *3 The Effects of Strategic Bombing on the German War Economy

AIRCRAFT DIVISION

(By Division and Branch)

- *4 Aircraft Division Industry Report
- 5 Inspection Visits to Various Targets (Special Report)

Airframes Branch

- 6 Junkers Aircraft and Aero Engine Works, Dessau, Germany
- 7 Erla Maschinenwerke G m b H, Heiterblick, German
- 8 A T G Maschinenbau, G m b H, Leipzig (Mockau), Germany
- 9 Gothaer Waggonfabrik, A G, Gotha, Germany
- 10 Focke Wulf Aircraft Plant, Bremen, Germany
- 11 Messerschmitt A G, Augsburg, Germany

{ Over-all Report
Part A
Part B
Appendices I, II, III

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- 13 Gerhard Fieseler Werke G m b H, Kassel, Germany
- 14 Wiener Neustaedter Flugzeugwerke, Wiener Neustadt, Austria

Aero Engines Branch

- 15 Bussing NAG Flugmotorenwerke G m b H, Brunswick, Germany
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- 17 Bavarian Motor Works Inc, Eisenach & Durrerhof, Germany
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Light Metal Branch

- 20 Light Metals Industry of Germany
- 21 Vereinigte Deutsche Metallwerke, Hildesheim, Germany
- 22 Metallgussgesellschaft G m b H, Leipzig, Germany

- 23 Aluminiumwerk G m b H, Plant No. 2, Bitterfeld, Germany
- 24 Gebrueder Giulini G m b H, Ludwigshafen, Germany
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- *31 Area Studies Division Report
- 32 A Detailed Study of the Effects of Area Bombing on Hamburg
- 33 A Detailed Study of the Effects of Area Bombing on Wuppertal
- 34 A Detailed Study of the Effects of Area Bombing on Dusseldorf
- 35 A Detailed Study of the Effects of Area Bombing on Solingen
- 36 A Detailed Study of the Effects of Area Bombing on Remscheid
- 37 A Detailed Study of the Effects of Area Bombing on Darmstadt
- 38 A Detailed Study of the Effects of Area Bombing on Lubeck
- 39 A Brief Study of the Effects of Area Bombing on Berlin, Augsburg, Bochum, Leipzig, Hagen, Dortmund, Oberhausen, Schweinfurt, and Bremen

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- *40 Civilian Defense Division—Final Report
- 41 Cologne Field Report
- 42 Bonn Field Report
- 43 Hanover Field Report
- 44 Hamburg Field Report—Vol I, Text; Vol II, Exhibits
- 45 Bad Oldesloe Field Report
- 46 Augsburg Field Report
- 47 Reception Areas in Bavaria, Germany

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- *48 German Electrical Equipment Industry Report
- 49 Brown Boveri et Cie, Mannheim Kafertal, Germany

Optical and Precision Instrument Branch

- *50 Optical and Precision Instrument Industry Report

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- *51 The German Abrasive Industry
- 52 Mayer and Schmidt, Offenbach on Main, Germany

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- *53 The German Anti-Friction Bearings Industry

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- *54 Machine Tools & Machinery as Capital Equipment
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- 59 The Defeat of the German Air Force
- 60 V-Weapons (Crossbow) Campaign
- 61 Air Force Rate of Operation
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- 63 Bombing Accuracy, USAAF Heavy and Medium Bombers in the ETO
- 64 Description of RAF Bombing
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- *64b The Effects of Strategic Bombing on German Morale

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- *65 The Effect of Bombing on Health and Medical Care in Germany

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- 82 Daimler Benz-Gaggenau Works, Gaggenau, Germany

83 Maschinenfabrik Augsburg-Nurnberg, Nurnberg, Germany

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